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UNITED STATES DEPARTMENT OF AGRICULTURE

MISCELLANEOUS PUBLICATION No. 128

LIST OF BULLETINS OF THE
AGRICULTURAL EXPERIMENT STATIONS
FOR THE CALENDAR YEARS
1929 AND 1930

By

CATHERINE E. PENNINGTON, Junior Librarian
Office of Experiment Stations



WASHINGTON, D. C., JANUARY, 1932

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UNITED STATES DEPARTMENT OF AGRICULTURE

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Washington, D. C.

January, 1932

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By CATHERINE E. PENNINGTON, *Junior Librarian, Office of Experiment Stations*

CONTENTS

	Page
List of bulletins-----	1
Index of authors-----	39
Index of subjects-----	52

LIST OF BULLETINS

ALABAMA AGRICULTURAL EXPERIMENT STATION, AUBURN

BULLETINS

228. Fertilizer experiments with cotton. J. T. Williamson. Feb., 1929.
229. Methods of research in soil dynamics as applied to implement design. M. L. Nichols. May, 1929.
230. Biology and control of the southern corn rootworm. F. S. Arant. Nov., 1929.
231. Steer feeding experiments in the Black Belt of Alabama. J. C. Grimes. Apr., 1930.
232. Experiments with legumes in Alabama. R. Y. Bailey, J. T. Williamson, and J. F. Duggar. May, 1930.
233. Oats with vetch or Austrian peas as grazing crops for fattening hogs. J. C. Grimes, W. E. Sewell, and W. C. Taylor. July, 1930.
234. Grading up hogs by the use of purebred sires. J. C. Grimes, W. E. Sewell, and W. C. Taylor. Nov., 1930.

ALASKA AGRICULTURAL EXPERIMENT STATIONS, JUNEAU

BULLETIN

8. Brief history of cattle breeding in Alaska. C. C. Georgeson. Jan., 1929.

ARIZONA AGRICULTURAL EXPERIMENT STATION, TUCSON

BULLETINS

129. Cotton fertilizer experiments in the Salt River Valley. G. H. Serviss and R. S. Hawkins. Sept. 15, 1929.
130. The climate of Arizona. H. V. Smith. Apr. 1, 1930.
131. Caliche in Arizona. J. F. Breazeale and H. V. Smith. Apr. 15, 1930.
132. Timber-rot in the pepper tree, *Schinus molle*. J. G. Brown. May 15, 1930.
133. Lettuce irrigation studies. H. C. Schwalen and M. F. Wharton. Nov. 15, 1930.
134. An economic study of range sheep production in Arizona. K. P. Pickrell and E. B. Stanley. Dec. 1, 1930.
135. Field experiments with cotton. R. S. Hawkins. Dec. 15, 1930.

¹ This publication is a continuation of Department Bulletin 1199, the three supplements thereto, and Miscellaneous Publication 65.

TECHNICAL BULLETINS

25. Plant and soil relations at and below the wilting percentage. O. C. Magistad and J. F. Breazeale. Feb. 1, 1929.
26. Magnesium and calcium in zeolitic soils. J. F. Breazeale. May 10, 1929.
27. Milling and baking qualities of pure lines of Arizona-grown wheat. W. E. Bryan and E. H. Pressley. June 15, 1929.
28. The so-called "build-up" and "break-down" of soil zeolites as influenced by reaction. P. S. Burgess. Sept. 15, 1929.
29. Maintenance of moisture-equilibrium and nutrition of plants at and below the wilting percentage. J. F. Breazeale. Mar. 15, 1930.
30. The base exchange property of organic matter in soils. W. T. McGeorge. June 15, 1930.

UNNUMBERED BULLETIN

Color schemes of cacti. J. M. Breazeale. June 1, 1930.

ARKANSAS AGRICULTURAL EXPERIMENT STATION, FAYETTEVILLE

BULLETINS

232. The southern corn rootworm. Dwight Isely. Jan., 1929.
233. Facts and problems of farm credit in Craighead County, Arkansas. A. N. Moore and C. O. Brannen. June, 1929.
234. Cotton wilt studies: II, Preliminary studies on wilt resistance and on the effect of certain soil factors on the development of cotton wilt. V. H. Young, J. O. Ware, and George Janssen. May, 1929.
235. Farm organization and management in typical upland sections of Arkansas. J. A. Dickey. Apr., 1929.
236. Economic phases of the Arkansas apple industry. A. P. Brodell and C. O. Brannen. June, 1929.
237. The farm credit situation in southwestern Arkansas. B. M. Gile. June, 1929.
238. The production of sterile anthrax antigens. S. J. Schilling. June, 1929.
239. A study of the effect of commercial fertilizers on the performance of peach trees. J. R. Cooper and C. B. Wiggans. June, 1929.
240. Organization and management of tomato canning factories in Arkansas. C. E. Campbell. June, 1929.
241. Sweet sorghums for syrup and forage. C. K. McClelland. June, 1929.
242. Experiments with alfalfa. Martin Nelson. June, 1929.
243. Cotton breeding studies: I, Inheritance of fiber length; II, heritable relationship of red plant color and leaf shape. J. O. Ware. June, 1929.
244. The life history of the fire blight pathogen, *Bacillus amylovorus*, as related to the means of over-wintering and dissemination. H. R. Rosen. Oct., 1929.
245. The status of cooperative cotton marketing in Arkansas. B. M. Gile. Dec., 1929.
246. Forty-first annual report, fiscal year ending June 30, 1929. D. T. Gray [and others]. Dec., 1929.
247. Beef producing qualities of purebred Aberdeen-Angus cattle compared with Arkansas native cattle. H. E. Dvorachek and A. T. Semple. Mar., 1931.
248. The biology of the bean leaf-beetle. Dwight Isely. Feb., 1930.
249. Factors influencing the flavor of butter: I, The effect of various starter cultures on the flavor of butter. C. C. Walts.— II, The effect of various neutralizers on the flavor of butter. C. C. Walts and M. S. Libbert. Feb., 1930.
250. Dietary requirements for fertility and lactation: I, The role of fat soluble vitamins in fertility and lactation. Barnett Sure. June, 1930.
251. Dietary requirements for fertility and lactation: II, The role of vitamin B in lactation and vitamin requirements of nursing young. Barnett Sure. June, 1930.
252. Dietary requirements for fertility and lactation: III, Pathological changes in nursing young of the albino rat suffering from vitamin B deficiency, and the role of vitamin B in infant nutrition. Barnett Sure. June, 1930.
253. Cotton spacing: II, Effect of blooming on earliness, fruit set and yield. J. O. Ware. June, 1930.
254. A study of the effect of certain fertilizer and cultural treatments upon the vigor of young Stayman apple trees. C. B. Wiggans. June, 1930.
255. Cooperative fertilizer experiments with cotton. Martin Nelson. June, 1930.
256. Preliminary studies on Arkansas horse-flies. H. H. Schwardt and D. G. Hall. May, 1930.
257. Forty-second annual report, fiscal year ending June 30, 1930. D. T. Gray [and others]. Nov., 1930.

CALIFORNIA AGRICULTURAL EXPERIMENT STATION, BERKELEY

BULLETINS

464. Drainage in the Sacramento Valley rice fields. W. W. Weir. Jan., 1929.
465. Curly top symptoms on the sugar beet. H. H. P. Severin. Mar., 1929.
466. The continuous can washer for dairy plants. A. W. Farrall. Mar., 1929.
467. Oat varieties in California. W. W. Mackie. Apr., 1929.
468. Sterilization of dairy utensils with humidified hot air. A. W. Farrall and W. M. Regan. May, 1929.
469. The solar heater. A. W. Farrall. June, 1929.
470. Maturity standards for harvesting Bartlett pears for eastern shipment. F. W. Allen. July, 1929.
471. The use of sulfur dioxide in shipping grapes. H. E. Jacob. July, 1929.
472. Adobe construction. J. D. Long. Sept., 1929.
473. Series on California crops and prices: Economic aspects of the sheep industry. E. C. Voorhies and W. E. Schneider. Sept., 1929.
474. Factors affecting the cost of tractor logging in the California pine region. M. E. Krueger. Aug., 1929.
475. Walnut supply and price situation. H. E. Erdman and W. U. Fuhrman. Sept., 1929.
476. Poultry houses and equipment. J. E. Dougherty and H. L. Belton. Oct., 1929.
477. Improved methods of harvesting grain sorghum. J. P. Conrad and E. J. Stirniman. Oct., 1929.
478. Feeding and management of dairy calves in California. S. W. Mead. Oct., 1929.
479. I. Irrigation experiments with peaches in California. A. H. Hendrickson and F. J. Veihmeyer.— II, Canning quality of irrigated peaches. P. F. Nichols. Nov., 1929.
480. The use, value, and cost of credit in agriculture. C. H. West. Nov., 1929.
481. Utilization of wild oat hay for fattening yearling steers. H. R. Guilbert. Oct., 1929.
482. Substitutes for wooden breakpins. A. H. Hoffman and E. G. McKibben. Nov., 1929.
483. Utilization of surplus prunes. E. M. Mrak and W. V. Cruess. Nov., 1929.
484. The effects of desiccating winds on citrus trees. H. S. Reed and E. T. Bartholomew. Jan., 1930.
485. Drying cut fruits. P. F. Nichols and A. W. Christie. Feb., 1930.
486. Pullorum disease (bacillary white diarrhea of chickens). J. R. Beach and S. T. Michael. Jan., 1930.
487. Series on California crops and prices: Asparagus. H. R. Wellman and E. W. Braun. Jan., 1930.
488. Series on California crops and prices: Cherries. H. R. Wellman and E. W. Braun. Feb., 1930.
489. Irrigation water requirement studies of citrus and avocado trees in San Diego County, California, 1926 and 1927. S. H. Beckett, H. F. Blaney, and C. A. Taylor. Apr., 1930.
490. Olive thinning and other means of increasing size of olives. H. E. Drobish. Apr., 1930.
491. Yield, stand and volume tables for Douglas fir in California. F. X. Schumacher. Apr., 1930.
492. Berry thinning of grapes. A. J. Winkler. Apr., 1930.
493. Fruit markets in eastern Asia. B. H. Crocheron and W. J. Norton. Apr., 1930.
494. Infectious bronchitis in fowls. George Kernohan. June, 1930.
495. Milk cooling on California dairy farms. B. D. Moses and J. R. Tavernetti. June, 1930.
496. Precooling of fresh fruits and temperatures of refrigerator cars and warehouse rooms. E. L. Overholser and B. D. Moses. June, 1930.
497. A study of the shipment of fresh fruits and vegetables to the Far East. E. L. Overholser. July, 1930.
498. Pickling green olives. W. V. Cruess. Oct., 1930. Supplementary to Circ. 278.
499. Air cleaners for motor vehicles. A. H. Hoffman. Oct., 1930.
500. Dehydration of grapes. P. F. Nichols and A. W. Christie. Oct., 1930.
501. Marketing California apples. E. A. Stokdyk, H. E. Erdman, C. H. West, and F. W. Allen. Nov., 1930.
502. Series on California crops and prices: Wheat. E. W. Braun. Nov., 1930.
503. St. Johnswort on range lands of California. A. W. Sampson and K. W. Parker. Dec., 1930.
504. Economic problems of California agriculture, a report to the Governor of California. Dec., 1930.
505. The snowy tree cricket and other insects injurious to raspberries. L. M. Smith. Dec., 1930.

HILGARDIA

- Vol. 3, No. 17. Factors affecting selling prices of land in the Eleventh federal farm loan district. David Weeks. Jan., 1929.
- Vol. 3, No. 18. Yellows disease of celery, lettuce, and other plants, transmitted by *Cicadula seanojata* (Fall.). H. H. P. Severin. Feb., 1929.
- Vol. 3, No. 19. A microscopical analysis of the fleeces of four Romney rams. J. F. Wilson. Feb., 1929.
- Vol. 3, No. 20. Additional host plants of curly top. H. H. P. Severin. Mar., 1929.
- Vol. 4, No. 1. Effects of early handicaps on chickens as measured by yolk absorption and body weight to twenty weeks of age. S. L. Parker. Mar., 1929.
- Vol. 4, No. 2. Changes in the nitrate and sulfate content of the soil solution under orchard conditions. E. L. Proebsting. Apr., 1929.
- Vol. 4, No. 3. Daily and seasonal air and soil temperatures at Davis, California. Alfred Smith. May, 1929.
- Vol. 4, No. 4. Root development and soil moisture. J. P. Conrad and F. J. Veihmeyer. May, 1929.
- Vol. 4, No. 5. The medullated wool fiber. J. F. Wilson. June, 1929.
- Vol. 4, No. 6. The effect of dormant pruning on the carbohydrate metabolism of *Vitis vinifera*. A. J. Winkler. Sept., 1929.
- Vol. 4, No. 7. Factors which modify the resistance of wheat to bunt, *Tilletia tritici* F. N. Briggs. Nov., 1929.
- Vol. 4, No. 8. An experimental study of the tests for the detection of carriers of *Bacterium pullorum*. S. T. Michael and J. R. Beach. Nov., 1929.
- Vol. 4, No. 9. A comparative investigation of certain film-forming fungi. M. A. Joslyn and W. V. Cruess. Nov., 1929.
- Vol. 4, No. 10. Comparisons of daytime and nighttime soil and air temperatures. Alfred Smith. Dec., 1929.
- Vol. 4, No. 11. Effects of various treatments on the carbon dioxide and oxygen in dormant potato tubers. Ora Smith. Dec., 1929.
- Vol. 4, No. 12. Vaccination of calves against tuberculosis with Calmette-Guérin culture BCG. C. M. Haring, Jacob Traum, F. M. Hayes, and B. S. Henry. Mar., 1930.
- Vol. 4, No. 13. Spirochetes as the etiological factor in certain specific necroses and hyperplastic formations in swine. J. A. Howarth. Mar., 1930.
- Vol. 4, No. 14. Studies of the breeding of sugar beets for resistance to curly top. Katherine Esau. Apr., 1930.
- Vol. 4, No. 15. Electrophoresis of tobacco mosaic virus. W. N. Takahashi and T. E. Rawlings. Apr., 1930.
- Vol. 4, No. 16. Mass production of egg parasites of the genus *Trichogramma*. S. E. Flanders. June, 1930.
- Vol. 5, No. 1. Kale yellows in California, caused by *Fusarium conglutinans* Wollenw. J. B. Kendrick. July, 1930.
- Vol. 5, No. 2. Dusts used for testing air cleaner efficiency. A. H. Hoffman. July, 1930.
- Vol. 5, No. 3. Concentration of certain constituents of the soil solution under orchard conditions. E. L. Proebsting. July, 1930.
- Vol. 5, No. 4. The carbohydrate metabolism of *Stipa pulchra*. A. W. Sampson and E. C. McCarty. Nov., 1930.
- Vol. 5, No. 5. Some effects of varying calcium and phosphorus intake on the estrus cycle and reproduction in the rat. H. R. Guilbert and G. H. Hart. Dec., 1930.

COLORADO AGRICULTURAL EXPERIMENT STATION, FORT COLLINS

BULLETINS

349. Effect of lumnite cement and plaster of paris caps on strength of concrete test cylinders. D. J. Tripp. Nov., 1929.
350. Suggestions concerning small irrigation pumping plants. W. E. Code. Jan., 1929.
351. Some common diseases of ornamental plants. E. L. LeClerc. May, 1929.
352. The sulphide sulphur content as a basis for diluting lime-sulphur for spraying. G. M. List. May, 1929.
353. Cost of producing crops on irrigated farms. R. T. Burdick and H. B. Pingrey. Sept., 1929.
354. Some factors relating to the feeding habits of grasshoppers with special reference to *Melanoplus bivittatus*. G. S. Langford. Jan., 1930.
355. Outline of Colorado tax laws for farmers and ranchmen. G. S. Klemmedson and C. C. Gentry. Oct., 1929.
356. Improvement of sagebrush range in Colorado. H. C. Hanson. Nov., 1929.

357. The home vegetable garden. A. M. Binkley. Feb., 1930.
358. Hog cholera and allied diseases. G. H. Glover. Dec., 1930.
359. Ideal types for Colorado standard potato varieties. C. H. Metzger. Feb., 1930.
360. Pastures for spring and fall grazing in mountains of Colorado. H. C. Hanson. Mar., 1930.
361. The cost of local government in Larimer County, Colorado. G. S. Klemmedson. Apr., 1930.
362. Effects of clover and alfalfa in rotation, Part II. W. P. Headden. Jan., 1930.
363. Effects of clover and alfalfa in rotation, Part III. W. P. Headden. Dec., 1930.
364. Effects of clover and alfalfa in rotation, Part IV. W. P. Headden. Jan., 1930.
365. Baking flour mixtures at high altitudes. M. W. Peterson. Dec., 1930.
366. Baking quick breads and cakes at high altitudes, a guide to housewives. M. W. Peterson. Dec., 1930.
367. Raspberry investigations: A preliminary study of the fruiting habit of the red raspberry (*Rubus strigosus*). R. V. Lott. Jan., 1931.
368. Cost of public education from viewpoint of agriculture in Larimer County, Colorado. G. S. Klemmedson. Nov., 1930.
369. The date to plant corn in Colorado. D. W. Robertson, Alvin Kezer, and G. W. Deming. Dec., 1930.
370. Oat varieties in Colorado. D. W. Robertson [and others]. Dec., 1930.
371. Barley in Colorado. D. W. Robertson [and others]. Dec., 1930.
372. Diseases of poultry. I. E. Newsom. Dec., 1930.

CONNECTICUT STATE AGRICULTURAL EXPERIMENT STATION, NEW HAVEN

BULLETINS

299. Report of the Tobacco substation at Windsor for 1928. P. J. Anderson and T. R. Swanback. Jan., 1929.
300. The composition of some commercial insecticides, fungicides, bactericides, rodenticides and weed killers, a compilation. H. J. Fisher and E. M. Bailey. Jan. 1929.
301. Control studies on the plum curculio in Connecticut apple orchards. Philip Garman and M. P. Zappe. Feb., 1929.
302. The willow scab fungus (*Fusicladium saliciperdu*). G. P. Clinton and F. A. McCormick. Mar., 1929.
303. Report on inspection of commercial feeding stuffs, 1928. E. M. Bailey. Mar., 1929.
304. The Asiatic beetle in Connecticut. R. B. Friend. Mar., 1929.
305. Twenty-eighth report of the state entomologist of Connecticut, 1928. W. E. Britton. Apr., 1929.
306. Soil reaction and liming as factors in tobacco production in Connecticut. M. F. Morgan, P. J. Anderson, and Henry Dorsey. Apr., 1929.
307. The Thirty-third report on food products and the Twenty-first report on drug products, 1928, food and drug inspection and related work. E. M. Bailey. May, 1929.
308. Report on inspection of commercial fertilizers, 1929. E. M. Bailey. Sept., 1929.
309. Fifty years' index, 1877-1927. E. H. Jenkins. Dec., 1929.
310. Canada-Leaming corn. D. F. Jones and W. R. Singleton. Jan., 1930.
311. Tobacco substation at Windsor, Report for 1929. P. J. Anderson, T. R. Swanback, O. E. Street [and others]. Jan., 1930.
312. Thomas B. Osborne, a memorial. W. L. Slate [and others]. Feb., 1930.
313. The oriental peach moth in Connecticut. Philip Garman. Mar., 1930.
314. White pine blister rust control in Connecticut. J. E. Riley, jr. Apr., 1930.
315. Twenty-ninth report, Connecticut state entomologist, 1929. W. E. Britton. Apr., 1930.
316. A maple leaf disease caused by *Cristulariella depraedans*. P. R. Bowen. Apr., 1930.
317. Report on inspection commercial feeding stuffs, 1929. E. M. Bailey. May, 1930.
318. Report of the director for the year ending October 31, 1929. W. L. Slate. May, 1930.
319. The Thirty-fourth report on food products and the Twenty-second report on drug products, 1929. E. M. Bailey. June, 1930.
320. The soils of Connecticut, progress report of investigations 1924-1930. M. F. Morgan. Sept., 1930.
321. Commercial fertilizers, report for 1930. E. M. Bailey. Oct., 1930.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION, STORRS

BULLETINS

153. Bovine infectious abortion: Tenth report, The establishing of abortion-free herds by an intensive system of serological testing, and segregation of non-reacting animals. L. F. Rettger, J. G. McAlpine, G. C. White, and R. E. Johnson. Jan., 1929.
154. Bovine infectious abortion: Eleventh report, Increased productivity of an abortion-free dairy herd. G. C. White, R. E. Johnson, L. F. Rettger, and J. G. McAlpine. Jan., 1929.
155. The maintenance and improvement of permanent pastures, first report: I, A discussion of the factors involved; II, the effects of fertilizers on the soil reaction, the flora, and the production as measured by grazing (1921-1928). B. A. Brown and W. L. Slate. Feb., 1929.
156. Epidemiological studies of blackhead in turkeys: II, Ordinary barnyard fowl as important agents of transmission. L. F. Rettger, W. F. Kirkpatrick, and J. G. McAlpine. Apr., 1929.
157. The sheep stomach worm. G. H. Lamson, jr., and A. F. Schulze. Sept., 1929.
158. Studies on infectious mastitis with special reference to streptococci, first report. G. D. Brigham, J. G. McAlpine, and E. O. Anderson. Sept., 1929.
159. Corn silage feeding investigations: Fifth paper, Relative feeding values of the dry matter of different types of silage corn ensiled at different stages of maturity. G. C. White and R. E. Johnson. Sept., 1929.
160. The causes of degeneration of Irish potatoes in Connecticut. B. A. Brown. Oct., 1929.
161. The genesis to farming occupations in Connecticut. J. L. Hypes and J. F. Markey. Oct., 1929.
162. Report of the director for the year ending June, 30, 1929. W. L. Slate. Nov., 1929.
163. Studies on the plumage of the silver spangled fowl: I, The expression of the spangled pattern during growth. L. C. Dunn and Walter Landauer.— II, Feather growth and feather pattern during forced regeneration. Walter Landauer and L. C. Dunn.— III, The symmetry conditions of the spangled pattern. Walter Landauer. Jan., 1930.
164. The organic mercury compounds for the control of scab and Rhizoctonia of potatoes. B. A. Brown. July, 1930.
165. An economic study of the agriculture of the Connecticut Valley: 3, Tobacco farm organization. C. I. Hendrickson. Sept., 1930.
166. Taxation in Connecticut, a preliminary survey with emphasis upon its relation to agriculture. M. S. Kendrick. Sept., 1930.
167. Corn silage feeding investigations: Seventh paper, Variations in hay consumption of dairy cattle with corn silages of different dry matter content. G. C. White, R. E. Johnson, and R. G. Connelly. Oct., 1930.
168. Dedication of Atwater laboratory, June 12, 1930. W. L. Slate [and others]. Nov., 1930.
169. Corn silage feeding investigations: Eighth paper, Optimum amount of silage in the dairy ration for economical production. G. C. White and A. D. Pratt. Nov., 1930.
170. The cost of cooling milk with electricity. E. O. Anderson. Nov., 1930.

DELAWARE AGRICULTURAL EXPERIMENT STATION, NEWARK

BULLETINS

160. (Technical bulletin 10.) Fruit jellies: VI, The role of pectin; 2, The extraction of pectin from pectic materials. P. B. Myers and G. L. Baker. June, 1929.
161. The marketing of Delaware sweet potatoes. H. S. Gabriel. Sept., 1929.
162. Annual report of the director for the fiscal year ending June 30, 1929. C. A. McCue [and others]. Nov., 1929.
163. Studies on the control of Bang's abortion disease of cattle. C. C. Palmer. Nov., 1929.
164. Pasture improvement. G. L. Schuster. June, 1930.
165. The marketing of Delaware cantaloupes, Part I. H. S. Gabriel. June, 1930.
166. (Technical bulletin 11.) The mechanism of buffer action in soils. P. B. Myers and G. M. Gilligan. Oct., 1930.
167. Annual report of the director for the fiscal year ending June 30, 1930. C. A. McCue [and others]. Nov., 1930.

FLORIDA AGRICULTURAL EXPERIMENT STATION, GAINESVILLE

BULLETINS

202. Cost of handling citrus fruit from the tree to the car in Florida. H. G. Hamilton. Apr., 1929.
203. (Technical bulletin.) A contribution to the biology and control of the green citrus aphid, *Aphis spiraeicola* Patch. R. L. Miller. Apr., 1929.
204. Strawberries in Florida, culture, diseases and insects. A. N. Brooks, J. R. Watson, and Harold Mowry. May, 1929.
205. The Japanese persimmon in Florida. A. F. Camp and Harold Mowry. June, 1929.
206. (Technical bulletin.) Manson's eyeworm of poultry. D. A. Sanders. June, 1929.
207. (Technical bulletin.) Angular leaf spot and fruit rot of cucumbers, caused by *Bacterium lachrymans* E. F. S. & Bry. G. F. Weber. Oct., 1929.
208. Cucumber diseases in Florida. G. F. Weber. Nov., 1929. Revision of Bul. 177.
209. Lawns in Florida. C. R. Enlow and W. E. Stokes. Dec., 1929.
210. Corn diseases in Florida. A. H. Eddins. Jan., 1930.
211. A study of the root systems of some important sod-forming grasses. A. S. Laird. Feb., 1930.
212. Diseases of sweet potatoes in Florida. G. F. Weber and Erdman West. Mar., 1930.
213. (Technical bulletin.) Potash in relation to cotton wilt. M. N. Walker. Apr., 1930.
214. Cotton diseases in Florida. M. N. Walker. May, 1930.
215. (Technical bulletin.) Effects of irrigation with sewage effluent on the yields and establishment of Napier grass and Japanese cane. W. E. Stokes, W. A. Leukel, and R. M. Barnette. May, 1930.
216. A nutritional study of the white school children in five representative counties of Florida. C. F. Ahmann, O. D. Abbott, and Georgia Westover. June, 1930.
217. A study of the cost of transportation of Florida citrus fruits with comparative costs from other producing areas. M. A. Brooker. June, 1930.
218. Fertilizer experiments with truck crops: I. Celery and lettuce on Leon fine sand; II, tomatoes on calcareous glade soil; III, truck crops with manganese on calcareous glade soil. J. J. Skinner and R. W. Ruprecht. July, 1930.
219. (Technical bulletin.) Growth behavior and maintenance of organic foods in Bahia grass. W. A. Leukel and J. M. Coleman. Aug., 1930.
220. (Technical bulletin.) Effect of seed-potato treatment on yield and Rhizoctonosis in Florida from 1924 to 1929. L. O. Gratz. Sept., 1930.
221. The tung-oil tree. Wilmon Newell, Harold Mowry, and R. M. Barnette. Oct., 1930.
222. (Technical bulletin.) Potato spraying and dusting experiments in Florida, 1924 to 1929. L. O. Gratz. Nov., 1930.

GEORGIA AGRICULTURAL EXPERIMENT STATION, EXPERIMENT

BULLETINS

150. Pimiento peppers. J. G. Woodroof and J. E. Bailey. Feb., 1929.
151. Fertilizer ratio experiments, conducted on Cecil sandy clay loam; cotton, corn and wheat grown in rotation. R. P. Bledsoe and J. J. Skinner. Jan., 1929.
152. Cotton fertilizers and cultural methods. R. P. Bledsoe. Apr., 1929.
153. Credit problems of Georgia cotton farmers. A. N. Moore, J. K. Giles, and R. C. Campbell. June, 1929.
154. Composting barnyard manure with sulphur and rock phosphate. W. G. Friedemann. July, 1929.
155. Marketing Georgia peaches. R. M. Middleton. May, 1929.
156. High points in work of Georgia experiment station, commemorating the opening of the Flynt Building. C. A. Whittle. June, 1929.
157. Quality of cotton grown in Georgia. W. T. Fullilove and W. B. Lanham. Sept., 1929.
158. Cotton fiber studies. R. C. Campbell. June, 1929.
159. Food habits of Georgia rural people. S. J. Mathews. May, 1929.
160. Some effects of pimiento pepper on poultry. W. L. Brown. June, 1930.
161. "Halo spot" of beans and kudzu. B. B. Higgins. June, 1930.
162. A pepper fruit rot new to the United States. B. B. Higgins. Aug., 1930.
163. Preserving fruits by freezing: I, Peaches. J. G. Woodroof. Aug., 1930.
164. Preserving fruits by freezing: II, Figs. J. G. Woodroof and J. E. Bailey. Oct., 1930.
165. Farm prices of cotton related to quality, Georgia crop, 1928-29. L. D. Howell and W. T. Fullilove. Sept., 1930.

HAWAII AGRICULTURAL EXPERIMENT STATION, HONOLULU

BULLETINS

58. Mango culture in Hawaii. W. T. Pope. Oct., 1929.
59. The Macadamia nut in Hawaii. W. T. Pope. Nov., 1929.
60. Utilization and composition of oriental vegetables in Hawaii. H. L. Chung and J. C. Ripperton. Dec., 1929.
61. Papaya culture in Hawaii. W. T. Pope. Oct., 1930.

IDAHO AGRICULTURAL EXPERIMENT STATION, MOSCOW

BULLETINS

163. Dairy herd improvement through the use of proved bulls. F. W. Atkeson, H. A. Mathiesen, and D. L. Fourt. May, 1929.
164. Work and progress of the agricultural experiment station for the year ending December 31, 1928. E. J. Iddings. June, 1929.
165. Food consumption and food expenditures in relation to standards of requirements and family income. M. W. Talbott. July, 1929.
166. Factors relating to the price of Idaho potatoes. R. B. Heflebower. June, 1929.
167. Progress report of prune storage and maturity studies. C. C. Vincent, Leif Verner, and E. C. Blodgett. Aug., 1929.
168. The control of fowl pox in poultry. E. M. Gildow, G. S. Schilling, Pren Moore, and C. E. Lampman. Dec., 1929.
169. Alfalfa on the cut-over lands of northern Idaho. J. H. Christ. Mar., 1930.
170. Work and progress of the agricultural experiment stations for the year ending December 31, 1929. E. J. Iddings. Apr., 1930.
171. The cherry industry in the Lewiston orchards with cultural recommendations. E. C. Blodgett. June, 1930.
172. Steer prices in relation to Idaho beef producers' problems. R. B. Heflebower. Aug., 1930.
173. Farming systems for eastern Washington and northern Idaho. George Severance, Byron Hunter, and Paul Eke. July, 1930. Also published as Washington Sta. Bul. 244.
174. Standardization of milk with skimmilk powder for the manufacture of cheddar cheese. H. C. Hansen and D. R. Theophilus. Aug., 1930.
175. Bulk handling grain from the hillside type combine. Hobart Beresford and E. N. Humphrey. Oct., 1930.

RESEARCH BULLETINS

7. Symptomatology, transmission, infection and control of bean mosaic in Idaho. W. H. Pierce and C. W. Hungerford. June, 1929.
8. Apple breeding in Idaho. C. C. Vincent and L. E. Longly. Nov., 1930.

ILLINOIS AGRICULTURAL EXPERIMENT STATION, URBANA

BULLETINS

319. Fertilizer experiments with truck crops in southern Illinois. J. W. Lloyd. Feb., 1929.
320. Inheritance of kernel arrangement in sweet corn. W. A. Huelsen and M. C. Gillis. Feb., 1929.
321. Swine type studies: I, Type in swine as related to rate and economy of gain. W. E. Carroll, Sleeter Bull, J. B. Rice, R. J. Laible, and R. A. Smith. May, 1929.
322. Swine type studies: II, Type in swine as related to quality of pork. Sleeter Bull and J. H. Longwell. May, 1929.
323. Swine type studies: III, The energy and protein requirements of growing swine and the utilization of feed energy in growth. H. H. Mitchell and T. S. Hamilton. May, 1929.
324. Seasonal features of Illinois grain marketing. L. J. Norton and C. L. Stewart. May, 1929.
325. Studies of the composition of milk. O. R. Overman, F. P. Sanmann, and K. E. Wright. May, 1929.
326. Developmental study of a rural-urban trade area. H. W. Mumford, C. L. Stewart, H. C. M. Case, and P. E. Johnston. May, 1929.
327. Crop yields from Illinois soil experiment fields in 1928. F. C. Bauer. May, 1929.

328. Summer rations for fattening steers. R. R. Snapp and J. H. Knox. June, 1929.
329. Organizing the corn-belt farm for profitable production, based on studies of farms in east-central Illinois. H. C. M. Case, R. H. Wilcox, and H. A. Berg. June, 1929.
330. Relative economy of the various cuts of pork. Sleeter Bull and J. H. Longwell. June, 1929.
331. Practices and problems of cooperative livestock shipping associations in Illinois. R. C. Ashby. June, 1929.
332. Electric power for the farm. E. W. Lehmann and F. C. Kingsley. June, 1929.
333. Enzyme activity of ice-cream improvers. P. H. Tracy and H. A. Ruehe. June, 1929.
334. Observations on the refrigeration of some Illinois fruits in transit. J. W. Lloyd and H. M. Newell. June, 1929.
335. Illini soybeans. C. M. Woodworth. Aug., 1929.
336. Quality in celery as related to structure. C. B. Sayre. Aug., 1929.
337. A field test for available phosphorus in soils. R. H. Bray. Aug., 1929.
338. Some comparisons of methods of fattening western lambs. W. G. Kammlade. Oct., 1929.
339. Varieties of oats for Illinois. G. H. Dungan and W. L. Burlison. Dec., 1929.
340. Experiments with blister canker of apple trees. H. W. Anderson. Jan., 1930.
341. A comparison of the transpiration rates of twenty-one deciduous fruit species. V. W. Kelley. Feb., 1930.
342. Livestock truckage rates in Illinois, with a comparison of marketing expense by truck and by rail. R. C. Ashby. Feb., 1930.
343. Studies on porcine infectious abortion. Robert Graham, I. B. Boughton, and E. A. Tunnicliff. Mar., 1930.
344. Growing potatoes in Illinois. J. J. Pieper, W. L. Burlison, and W. P. Flint. Apr., 1930.
345. Use of honey in ice-cream manufacture. P. H. Tracy, H. A. Ruehe, and F. P. Sanmann. May, 1930.
346. Fertilizing twenty-five kinds of vegetables. J. W. Lloyd and L. H. Strubinger. June, 1930.
347. Crop yields from Illinois experiment fields in 1929, together with a general summary for the rotation periods ending in 1929. F. C. Bauer. June, 1930.
348. Effect of certain hydrocarbon oils on respiration of foliage and dormant twigs of the apple. V. W. Kelley. June, 1930.
349. Growing alfalfa in Illinois. W. L. Burlison, O. H. Sears, and J. C. Hackleman. June, 1930.
350. Some factors influencing the keeping quality of fruit in transit. J. W. Lloyd and H. M. Newell. June, 1930.
351. Prices of Illinois farm products from 1866 to 1929. L. J. Norton and B. B. Wilson. July, 1930.
352. Factors affecting the heat coagulation of homogenized coffee cream. P. H. Tracy and H. A. Ruehe. [1930.]
353. Effect of certain hydrocarbon oils on the transpiration rate of some deciduous tree fruits. V. W. Kelley. Aug., 1930.
354. Corn diseases in Illinois, their extent, nature, and control. Benjamin Koehler and J. R. Holbert. Sept., 1930.
355. Effects of sex, length of feeding period, and a ration of ear-corn silage on the quality of baby beef. Sleeter Bull, F. C. Olson, and J. H. Longwell. Sept., 1930. Also abstract edition.
356. Inheritance in lettuce. C. E. Durst. Oct., 1930.
357. Experiments in forcing gladioli. F. F. Weinard and S. W. Decker. Oct., 1930.
358. Summer-budded versus winter-grafted roses. F. F. Weinard and S. W. Decker. Oct., 1930.
359. New protection against stored-grain insects. W. P. Flint and C. O. Mohr. Nov., 1930.
360. A nonacid Babcock method for determining fat in ice cream. O. R. Overman and O. F. Garrett. Dec., 1930.
361. Breeding two new varieties of greenhouse tomatoes resistant to Fusarium wilt. W. A. Huelsen and M. C. Gillis. Dec., 1930.
362. Response of Illinois soils to systems of soil treatment. F. C. Bauer. Dec., 1930.
363. Prices of Illinois farm products from 1921 to 1929. L. J. Norton. Dec., 1930.

SOIL REPORTS

42. Morgan County soils. R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. Feb., 1929.
43. Douglas County soils. R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. July, 1929.

44. Coles County soils. R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. Aug., 1929.
45. Macon County soils. R. S. Smith, E. A. Norton, E. E. DeTurk, F. C. Bauer, and L. H. Smith. Dec., 1929.
46. Edwards County soils. E. A. Norton, R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. July, 1930.
47. Piatt County soils. R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. Dec., 1930.

INDIANA AGRICULTURAL EXPERIMENT STATION, LAFAYETTE

BULLETINS

328. Buying tomatoes on grade, 1928. F. C. Gaylord and H. M. Cleaver. Feb., 1929.
329. Comparison of soil liming materials. A. T. Wiancko, G. P. Walker, and S. D. Conner. Jan., 1929.
330. Cattle feeding: Winter steer feeding, 1925-26, 1926-27, 1927-28. J. H. Skinner and F. G. King. Jan., 1929.
331. The greenhouse centipede. H. K. Riley. Mar., 1929.
332. Relation of farm power and farm organization in central Indiana. O. G. Lloyd and L. G. Hobson. June, 1929.
333. Sheep feeding: XXIII [i. e. XVIII], Fattening western lambs, 1928. Claude Harper. Nov., 1929.
334. The marketing of eggs on a graded basis. E. R. Menefee. Nov., 1929.
335. Marketing Indiana timber. W. L. Neubrech. Jan., 1930.
336. Buying tomatoes on grade, 1929. F. C. Gaylord and J. H. MacGillivray. Feb., 1930.
337. Motor transportation of hogs to the Indianapolis market. J. R. Wiley. Mar., 1930.
338. The two-litter hog system on Indiana farms. G. E. Young. May, 1930.
339. Fuels used for cooking purposes in Indiana rural homes. Miriam Rapp. May, 1930.
340. The influence of the growth and fattening processes on the quantity and quality of meat yielded by swine. E. L. Scott. June, 1930.
341. Soybeans as a substitute for tankage in fattening spring pigs on legume pasture. C. M. Vestal. June, 1930.
342. Types of farming in Indiana. E. C. Young and F. F. Elliott. June, 1930.
343. Sheep feeding: Fattening western lambs (type test), 1925-'26, 1926-'27, 1927-'28, 1928-'29. Claude Harper. Aug., 1930.
344. Lamb production: I, Producing native lambs, the value of pasture, 1927-1928-1929. Claude Harper. Sept., 1930.

IOWA AGRICULTURAL EXPERIMENT STATION, AMES

BULLETINS

256. Types of farming in Iowa. C. L. Holmes. Jan., 1929.
257. Relation of certain ear and kernel characters of Reid Yellow Dent corn to yield. H. D. Hughes and J. L. Robinson. Jan., 1929.
258. A simple linebreeding program for poultry breeders. C. W. Knox. Apr., 1929.
259. The corn enterprise in Iowa. E. B. Hurd. Apr., 1929.
260. Life, service and cost of service of farm machinery. J. B. Davidson. June, 1929.
261. The crop system in Iowa County. J. A. Hopkins, jr. June, 1929.
262. The inoculation of non-legumes. L. W. Erdman and P. E. Brown. June, 1929. Also abridged edition.
263. Species and varietal crosses in cucurbits. A. T. Erwin and E. S. Haber. June, 1929.
264. Horses, tractors, and farm equipment. J. A. Hopkins, jr. June, 1929.
265. High yielding strains and varieties of corn for Iowa. H. D. Hughes, J. L. Robinson, and A. A. Bryan. July, 1929. Also abridged edition.
266. The management of peat and alkali soils in Iowa. W. H. Stevenson, P. E. Brown, and J. L. Boatman. Jan., 1930.
267. Creamery organization and construction. Henry Giese and Martin Mortensen. Feb., 1930.
268. Cropping systems in Iowa, past and present. E. B. Hurd. Apr., 1930.
269. Field experiments with fertilizers on some Iowa soils. W. H. Stevenson, P. E. Brown, L. W. Forman, H. R. Meldrum, A. J. Englehorn, and R. E. Bennett. May, 1930.
270. The livestock system in Iowa County. J. A. Hopkins, jr., and R. S. Kifer. June, 1930.

271. Relative efficiency of calves, yearlings and two-year-old steers for the producer. C. C. Culbertson, J. M. Evvard, and W. E. Hammond. June, 1930. Also abridged edition.
272. Influence of the animal's age upon the quality and palatability of beef: Part I, Carcass yields and quality of meat cuts. M. D. Helser.— Part II, The roast beef, preparation, quality, and palatability. P. M. Nelson, Belle Lowe, and M. D. Helser. June, 1930.
273. Soft ear corn silage for swine. J. M. Evvard, C. C. Culbertson, Q. W. Wallace, and E. J. Maynard. June, 1930. Also abridged edition.
274. Harvesting cornstalks for industrial uses. J. B. Davidson and E. V. Collins. Nov., 1930.
275. The population of Iowa, its composition and changes, a brief sociological study of Iowa's human assets. W. L. Harter and R. E. Stewart. Nov., 1930.

RESEARCH BULLETINS

117. Bacteriological studies on sulfid spoilage of canned vegetables. C. H. Werkman. May, 1929.
118. A new feeding method and standards for fattening young swine. J. M. Evvard. June, 1929.
119. Factors influencing egg production: I, The influence of maturity upon egg production in S. C. White Leghorns. C. W. Knox. Jan., 1930.
120. The vitamin B content of vegetables. M. C. House, P. M. Nelson, and E. S. Haber. Feb., 1930.
121. The inheritance of germless seeds in maize. J. B. Wentz. Feb., 1930.
122. International trade in pork and pork products. Knute Bjorka. Feb., 1930.
123. Proteolysis by *Streptococcus lactis* with special reference to butter cultures and butter. B. W. Hammer and V. H. Patil. Mar., 1930.
124. Infection studies of *Diplodia zeae* (Schw.) Lev. and control of seedling blights of corn. W. P. Raleigh. Apr., 1930.
125. The biology of the four-lined borer *Luperina stipata* (Morr.). G. C. Decker. May, 1930.
126. The production of artificial farm manures. F. B. Smith, W. H. Stevenson, and P. E. Brown. June, 1930.
127. The effects of artificial farm manures on soils and crops. F. B. Smith and P. E. Brown. June, 1930.
128. Factors influencing egg production: II, The influence of the date of first egg upon maturity and egg production. C. W. Knox. June, 1930.
129. Long term loans of Iowa banks. F. L. Garlock. June, 1930.
130. The effect of delayed harvest upon yield of grain. L. C. Burnett and A. L. Bakke. June, 1930.
131. Acidity changes associated with the keeping quality of apples under various storage conditions. H. H. Plagge and Fisk Gerhardt. June, 1930.
132. Microbiological studies of some typical Iowa soil profiles. P. E. Brown and T. H. Benton. June, 1930.
133. The inheritance of color and horns in blue-gray cattle, II. J. M. Evvard, P. S. Shearer, E. W. Lindstrom, and A. D. B. Smith. June, 1930.
134. Bacteriology of butter: I, Influence of the distribution of the non-fatty constituents on the changes in bacterial content during holding. B. W. Hammer and R. V. Hussong. Dec., 1930.

SOIL REPORTS

54. Plymouth County soils. W. H. Stevenson, P. E. Brown, D. S. Gray, L. W. Forman, and H. R. Meldrum. Apr., 1929.
55. Harrison County soils. W. H. Stevenson, P. E. Brown, T. H. Benton, L. W. Forman, and H. R. Meldrum. May, 1929.
56. Delaware County soils. W. H. Stevenson, P. E. Brown, Bryan Boatman, L. W. Forman, H. R. Meldrum, and R. E. Bennett. May, 1929.
57. Jones County soils. W. H. Stevenson, P. E. Brown, A. M. O'Neal, L. W. Forman, H. R. Meldrum, and R. E. Bennett. May, 1929.
58. Fremont County soils. W. H. Stevenson, P. E. Brown, C. L. Orrben, L. W. Forman, and H. R. Meldrum. May, 1929.
59. Cherokee County soils. W. H. Stevenson, P. E. Brown, D. S. Gray, H. R. Meldrum, and L. W. Forman. May, 1929.
60. Carroll County soils. W. H. Stevenson, P. E. Brown, A. M. O'Neal, H. R. Meldrum, and L. W. Forman. Oct., 1930.

61. Howard County soils. W. H. Stevenson, P. E. Brown, C. L. Orrben, L. W. Forman, H. R. Meldrum, and R. E. Bennett. Oct., 1930.
62. Warren County soils. W. H. Stevenson, P. E. Brown, A. M. O'Neal, L. W. Forman, H. R. Meldrum, A. J. Englehorn, and R. E. Bennett. Oct., 1930.
63. Chickasaw County soils. W. H. Stevenson, P. E. Brown, C. L. Orrben, H. R. Meldrum, L. W. Forman, and R. E. Bennett. Oct., 1930.
64. Kossuth County soils. W. H. Stevenson, P. E. Brown, T. H. Benton, D. S. Gray, H. R. Meldrum, L. W. Forman, and R. E. Bennett. Oct., 1930.
65. Clayton County soils. W. H. Stevenson, P. E. Brown, T. H. Benton, H. R. Meldrum, L. W. Forman, and R. E. Bennett. Oct., 1930.

KANSAS AGRICULTURAL EXPERIMENT STATION, MANHATTAN

BULLETINS

247. Poultry diseases, their prevention and control. L. D. Bushnell and C. A. Brandly. June, 1929. Revision of Circ. 106.
248. Wheat production in Kansas. S. C. Salmon and R. I. Throckmorton. July, 1929.
249. Soybean production in Kansas. J. W. Zahnley. Feb., 1930.
250. A report of the Tribune branch agricultural experiment station. T. B. Stinson and H. H. Laude. Mar., 1930.
251. Types of farming in Kansas. J. A. Hodges, F. F. Elliott, and W. E. Grimes. Aug., 1930.
252. Crossbred poultry. D. C. Warren. Dec., 1930.

TECHNICAL BULLETINS

25. Principal poisonous plants in Kansas. F. C. Gates. July, 1930.
26. A study of factors influencing inoculation experiments with *Azotobacter*. P. L. Gainey. Aug., 1930.

KENTUCKY AGRICULTURAL EXPERIMENT STATION, LEXINGTON

BULLETINS

291. (Research bulletin.) Calcium metabolism in the laying hen: III, Calcium carbonate and hatchability. G. D. Buchner, J. H. Martin, and A. M. Peter. Jan., 1929.
292. Systems of farming for the Purchase region of Kentucky. J. B. Hutson, W. G. Finn, and Z. L. Galloway. Feb., 1929.
293. Leafhopper injury to clover and alfalfa. H. H. Jewett. Mar., 1929.
294. Feeding trials with laying hens: I, Varying amounts of meat scrap; II, dull-gray and white, shiny limestone; III, all-mash and grain and mash. J. H. Martin and W. M. Insko, jr. Apr., 1929.
295. Commercial feeds in Kentucky in 1928. J. D. Turner, H. D. Spears, W. G. Terrell, and L. V. Amburgey. May, 1929.
296. (Research bulletin.) Bacillary white diarrhea and related diseases of chickens. P. R. Edwards and F. E. Hull. Sept., 1929.
297. (Research bulletin.) Potato flea-beetles. H. H. Jewett. Oct., 1929.
298. Analyses of commercial fertilizers. H. E. Curtis, H. R. Allen, and Lelah Gault. Dec., 1929.
299. The Hopkinsville experiment field. George Roberts, J. F. Freeman, and E. J. Kinney. Mar., 1930.
300. Social and economic effects of land speculation on farm families in central Kentucky. Merton Oyler. Mar., 1930.
301. Cost of living and population trends in Laurel County, Kentucky. Merton Oyler. Mar., 1930.
302. Quality as a factor in the price of Kentucky lambs. E. C. Johnson and C. D. Phillips. Apr., 1930.
303. Farm tenancy in central Kentucky. W. D. Nicholls. Apr., 1930.
304. The effect of vitamin D supplements on laying hens. J. H. Martin, S. E. Erikson, and W. M. Insko, jr. Apr., 1930.
305. Farm management and incomes of farm families in Laurel County, Kentucky. W. D. Nicholls and H. W. Hawthorne. May, 1930.
306. Virus diseases of tobacco in Kentucky. E. M. Johnson. June, 1930.
307. Share leasing contracts. W. D. Nicholls. July, 1930.
308. (Research bulletin.) The potassium, chlorine and sulfate content of Kentucky tobacco as related to grade. O. M. Shedd. July, 1930.

309. (Research bulletin.) The relation of some tobacco viruses to potato degeneration. W. D. Valleau and E. M. Johnson. July, 1930.
310. Commercial feeds in Kentucky in 1929. J. D. Turner, H. D. Spears, W. G. Terrell, and L. V. Amburgey. July, 1930.
311. The agricultural credit situation in Kentucky. H. B. Price, C. J. Bradley, and E. C. Johnson. Dec., 1930.
312. The budget method of improving farm organization and management. W. G. Finn and Z. L. Galloway. Dec., 1930.
313. Analyses of commercial fertilizers. H. E. Curtis, H. R. Allen, and Lelah Gault. Dec., 1930.

LOUISIANA AGRICULTURAL EXPERIMENT STATION, BATON ROUGE

BULLETINS

203. Sugar cane test fields and fertilizer demonstrations. C. B. Gouaux. Apr., 1929.
204. Report of the North Louisiana experiment station for the years 1928-1929. Sidney Stewart. Mar., 1930.
205. Report of the Rice experiment station for the years 1928-1929. J. M. Jenkins. Mar., 1930.
206. Report of the Fruit and truck experiment station for the years 1928-1929. Boleslaus Szymoniak. Mar., 1930.
207. Cotton varieties for Louisiana, a preliminary report. H. B. Brown. Feb., 1930.
208. The agricultural credit situation in Louisiana. R. L. Thompson. Jan., 1930.
209. Management of farm woodlands in Louisiana. G. D. Marckworth and Robert Moore. Apr., 1930.
210. Louisiana corn varieties. H. B. Brown. Feb., 1930.
211. Sugarcane variety work at the test fields. C. B. Gouaux. May, 1930.
212. Factors influencing the severity of the root rot troubles of sugar cane. H. H. Flor. May, 1930.
213. Blackberry and muscadine grape culture at Hammond, Louisiana. Boleslaus Szymoniak. May, 1930.
214. Damage by the rice water weevil proved negligible. J. W. Ingram and W. A. Douglas. Aug., 1930.
215. An economic study of factors affecting farm organization and power utilization of sugar cane farms, 1929. G. H. Reuss. Nov., 1930.
216. Rice farm irrigation systems in Louisiana, 1929. R. J. Saville. Nov., 1930.
217. Some economic problems in the rice farming area, 1929. R. J. Saville. Nov., 1930.
218. Tractors and trucks on Louisiana rice farms, 1929, with supplementary data on labor requirements. R. J. Saville and G. H. Reuss. Dec., 1930.

MAINE AGRICULTURAL EXPERIMENT STATION, ORONO

BULLETINS

350. Concentrated fertilizers for potatoes in Aroostook County. B. E. Brown and F. V. Owen. May, 1929.
351. An economic study of 239 blueberry farms in Washington and Hancock Counties. Maine. C. H. Merchant. July, 1929.
352. Potato spraying and dusting experiments 1926 to 1928. Reiner Bonde, Donald Folsom, and E. R. Tobey. Oct., 1929.
353. Abstracts of papers not included in bulletins; finances; meteorology; index. Dec., 1929.
354. Sources of nitrogen for potato fertilizers in Aroostook County. B. E. Brown, F. V. Owen, and E. R. Tobey. Apr., 1930.
355. Local market requirements of agricultural products in Aroostook County, Maine. C. H. Merchant and B. T. Smith. June, 1930.
356. Blueberry and huckleberry insects. C. R. Phipps. Dec., 1930.
357. Abstracts of papers not included in bulletins; finances; meteorology; index. Dec., 1930.

MARYLAND AGRICULTURAL EXPERIMENT STATION, COLLEGE PARK

BULLETINS

304. An economic study of the production of tomatoes in Maryland. W. P. Walker. Mar., 1929.
305. An economic study of the production of sweet corn and peas in Maryland. S. H. DeVault and W. P. Walker. Mar., 1929.

306. Factors influencing yield and quality of peas, biophysical and biochemical studies. V. R. Boswell. Mar., 1929.
307. A study of spinach varieties with special reference to their canning qualities. H. B. Farley. Mar., 1929.
308. Insecticidal value of pyrethrum soaps. E. N. Cory and N. A. Eaton. Apr., 1929.
309. Amounts of fertilizer and manure required for maintenance of fertility for vegetable production. T. H. White and V. R. Boswell. Apr., 1929.
310. A progress report on the testing of sulfonated oxidation products of petroleum for their insecticidal properties. J. L. Hoerner. June, 1929.
311. Fertilizer studies and the production of sweet potatoes. F. W. Geise. July, 1929.
312. Variety studies of spinach. F. W. Geise and H. B. Farley. July, 1929.
313. Studies of premature flower formation in wintered-over cabbage. V. R. Boswell. Aug., 1929.
314. Field and sand culture experiments on fertilizing asparagus. T. H. White and V. R. Boswell. Aug., 1929.
315. The production and marketing of strawberries on the Eastern Shore of Maryland. W. E. Whitehouse, W. J. Hart, and W. P. Walker. Aug., 1929.
316. Ground versus unground soybean hay for dairy cows. L. W. Ingham and DeVoe Meade. Oct., 1929.
317. Tests with potato seed from various sources. R. A. Jehle and E. I. Oswald. Nov., 1929.
318. Cannery tomatoes, results of three years' tests of varieties. F. W. Geise. Dec., 1929.
319. Calf feeding investigations: I, Raising dairy calves on nurse cow, whole milk, remade skim milk and calf meal. L. W. Ingham, DeVoe Meade, and M. H. Berry. Jan., 1930.
320. Spinach for canning, the relation of physical and chemical properties to quality. F. W. Geise. Mar., 1930.
321. Prices paid for Maryland farm products, 1851-1927. R. F. Hale. Sept., 1930.
322. A production and economic survey of the black raspberry industry of Washington County, Maryland. Hugh Ross and E. C. Auchter. Aug., 1930.
323. Maryland grasses. J. B. S. Norton. Sept., 1930.

MASSACHUSETTS AGRICULTURAL EXPERIMENT STATION, AMHERST

BULLETINS

247. Biennial report for the fiscal years ending Nov. 30, 1927 and 1928. F. J. Sievers [and others]. Feb., 1929.
248. Tomato leaf-mold, the use of fungicides for its control in greenhouses. E. F. Guba. Mar., 1929.
249. The plum curculio in apples in Massachusetts. W. D. Whitcomb. Mar., 1929.
250. The consumer demand for apples. L. P. Jefferson. Apr., 1929.
251. Causes of differences in poultry profits. R. L. Mighell and F. H. Branch. May, 1929.
252. Supplements for copper fungicides. E. B. Holland, C. O. Dunbar, and G. M. Gilligan. June, 1929.
253. Milk substitutes for calves. J. B. Lindsey and J. G. Archibald. July, 1929.
254. The preparation and effectiveness of basic copper sulfate as a fungicide. E. B. Holland, C. O. Dunbar, G. M. Gilligan, and W. L. Doran. June, 1929.
255. Studies in mineral nutrition. J. B. Lindsey and J. G. Archibald. Nov., 1929.
256. The cost of government in Massachusetts, 1910-1926. H. W. Yount and R. E. Sherburne. Nov., 1929.
257. The cutaneous vaccine for fowl pox. N. J. Pyle. Dec., 1929.
258. Inbreeding in relation to egg production. F. A. Hays. Dec., 1929.
259. Rate of growth in Rhode Island Reds. F. A. Hays and Ruby Sanborn. Dec., 1929.
260. Annual report for the fiscal year ending Nov. 30, 1929. F. J. Sievers [and others]. Mar., 1930.
261. Ecological studies of the Mexican bean beetle. H. L. Sweetman and H. T. Fernald. Feb., 1930.
262. Intensive grassland management. R. C. Foley, E. J. Montague, and C. H. Parsons. Feb., 1930.
263. Food service in Massachusetts rural elementary schools. Esther Davies. Apr., 1930.
264. Duration of annual molt in relation to egg production. F. A. Hays and Ruby Sanborn. June, 1930.
265. A chemical study of cranberries. F. W. Morse. Oct., 1930.

- 266. Part-time farming in Massachusetts. David Rozman. Oct., 1930.
- 267. Hardy woody plants. F. A. Waugh and C. H. Thompson. Oct., 1930.
- 268. Frozen sweet cream as an ingredient of ice cream. M. J. Mack. Dec., 1930.
- 269. Packaged ice cream. K. E. Wright. Dec., 1930.
- 270. Meteorological records, a forty-year summary, 1889–1928. C. I. Gunness. Dec., 1930.

MICHIGAN AGRICULTURAL EXPERIMENT STATION, EAST LANSING

SPECIAL BULLETINS

- 187. What makes some farms pay, a business analysis of 114 farms in Eaton County, Michigan. E. B. Hill and F. T. Riddell. Feb., 1929.
- 188. Pollination of orchard fruits in Michigan. R. E. Marshall, Stanley Johnston, H. D. Hootman, and H. M. Wells. Mar., 1929.
- 189. The marketing of Michigan milk through creameries, cream stations, condenseries and cheese factories. F. T. Riddell and J. T. Horner. Feb., 1929.
- 190. Oak forests of northern Michigan. Joseph Kittredge and A. K. Chittenden. June, 1929.
- 191. Barley for Michigan farms: Part I [Barley production]; the culture of barley. H. C. Rather.— Part II, Barley varieties. E. E. Down, H. M. Brown, and F. H. Clark. Mar., 1929.
- 192. Causes and effects of soil heaving. M. M. McCool and G. J. Bouyoucos. July, 1929.
- 193. Cantaloupe production in Michigan. J. B. Edmond, A. B. Strand, and F. J. McNall. June, 1930.
- 194. The use of peat in the greenhouse. Alex Laurie. Jan., 1930.
- 195. Maintaining the productivity of cherry trees. V. R. Gardner. Mar., 1930.
- 196. The farm woodlot in Michigan. A. K. Chittenden and P. W. Robbins. Apr., 1930.
- 197. Oat tests at the Michigan experiment station. E. E. Down, H. M. Brown, and F. H. Clark. Apr., 1930.
- 198. Combine harvester threshers in Michigan. E. C. Sauve. June, 1930.
- 199. Studies in swine feeding, Parts I, II, III. W. E. J. Edwards. May, 1930.
- 200. Hogging off corn. W. E. J. Edwards. May, 1930.
- 201. The influence of sugar and butterfat on quality of ice cream. P. S. Lucas, Toshihide Matsui, and D. E. Mook. May, 1930.
- 202. The propagation of the highbush blueberry. Stanley Johnston. May, 1930.
- 203. Spraying materials and the control of apple scab. W. C. Dutton. Apr., 1930.
- 204. Investigations of corn borer control at Monroe, Michigan. A. R. Marston and C. B. Dibble. May, 1930.
- 205. Soil fertilization for sugar beets. James Tyson and M. M. McCool. Nov., 1930.
- 206. Types of farming in Michigan. E. B. Hill, F. T. Riddell, and F. F. Elliott. Dec., 1930.

TECHNICAL BULLETINS

- 96. A local farm real estate price index. F. M. Thrun. Mar., 1929.
- 97. Studies on the overwintering and modes of infection of the fire blight organism. E. C. Tullis. Apr., 1929.
- 98. Further studies on the value of non-virulent living culture vaccination of cattle against *Brucella abortus* infection. I. F. Huddleson. Mar., 1929. Chart section published separately under title: Herd charts.
- 99. Defective graft unions in the apple and the pear. F. C. Bradford and B. G. Sitton. June, 1929.
- 100. The differentiation of the species of the genus *Brucella*. I. F. Huddleson. Aug., 1929.
- 101. A test for water-soluble phosphorus. studies on water-soluble phosphorus in field soils. C. H. Spurway. Aug., 1929.
- 102. Keeping qualities of butter: VI, Experiments on the production of metallic flavor in butter and milk; VII, the microbic flora of off-flavored butter. G. L. A. Ruehle. Jan., 1930.
- 103. The pathogenicity of the species of the genus *Brucella* for the fowl. I. F. Huddleson and M. W. Emmel. Aug., 1929.
- 104. The physiological effect of ethylene gas upon celery, tomatoes and certain fruits. R. P. Hibbard. Feb., 1930.
- 105. The results of a five year mineral feeding investigation with dairy cattle. O. E. Reed and C. F. Huffman. Feb., 1930.
- 106. The fruiting habits and pruning of the Campbell early grape. N. L. Partridge. June, 1930.

107. The Lansing food survey. C. A. Scholl and W. O. Hedrick. Nov., 1930.
108. Influence of soil conditions, fertilizer treatments, and light intensity on growth, chemical composition, and enzymic activities of sugar beets. James Tyson. Oct., 1930.

QUARTERLY BULLETINS

Quarterly bulletins, Vol. 11, No. 3—Vol. 13, No. 2. February, 1929—November, 1930. Each number contains various articles relating to agricultural practice, based on investigational work of the station.

MINNESOTA AGRICULTURAL EXPERIMENT STATION, UNIVERSITY FARM, ST. PAUL

BULLETINS

250. Stoning farm lands. M. J. Thompson and A. J. Schwantes. Jan., 1929.
251. Economic aspects of local elevator organization. Hutzal Metzger and H. B. Price. Apr., 1929.
252. Reed canary grass. A. C. Arny, M. C. Hansen, R. E. Hodgson, and G. H. Nesom. Mar., 1929.
253. Incomes and expenditures of village and town families in Minnesota. C. C. Zimmerman. Mar., 1929.
254. Selection and use of pork cuts. A. M. Child. Apr., 1929.
255. Incomes and expenditures of Minnesota farm and city families, 1927–28. C. C. Zimmerman. June, 1929.
256. The combine harvester in Minnesota. A. J. Schwantes [and others]. July, 1929.
257. Types of farming in Minnesota. L. F. Garey. Aug., 1929. Supplement is Bul. 268.
258. A study of breeding records of dairy herds. C. H. Eckles. Nov., 1929.
259. Common injurious mammals of Minnesota. M. S. Johnson. Jan., 1930.
260. Double-crossed corn in Minnesota. H. K. Hayes, H. E. Brewbaker, and F. R. Immer. Feb., 1930.
261. Sweet clover hay for beef cattle, fattening baby beeves and two-year-old steers. O. M. Kiser and W. H. Peters. Feb., 1930.
262. Sources of power on Minnesota farms. W. L. Cavert. Feb., 1930.
263. Reed canary grass for meadows and pastures. A. C. Arny, R. E. Hodgson, and G. H. Nesom. Feb., 1930.
264. Small grain varieties in Minnesota. H. K. Wilson and A. C. Arny. Feb., 1930.
265. Alfalfa as a rotation crop. P. E. Miller and R. O. Bridgford. May, 1930.
266. Cost of combine harvesting in Minnesota. G. A. Pond and L. B. Bassett. May, 1930.
267. Alfalfa trials at the North central experiment station. O. I. Bergh. June, 1930.
268. Systems of farming in northwestern Minnesota. L. F. Garey and F. F. Elliott. Aug., 1930. Supplement to Bul. 257.
269. Farm trade centers in Minnesota, 1905–29, a study of rural social organization. C. C. Zimmerman. Sept., 1930.
270. Factors affecting the physical and economic cost of butterfat production in Pine County, Minnesota. G. A. Pond and Mordecai Ezekiel. Dec., 1930.
271. Lumber production and wood utilization in southeastern Minnesota, with special reference to the farm woodlot. L. W. Rees. Aug., 1930.
272. Fattening lambs. P. S. Jordan and W. H. Peters. Dec., 1930.
273. Fat losses in buttermilk. W. B. Combs and S. T. Coulter. Nov., 1930.

TECHNICAL BULLETINS

57. Tables for determining the volume of black spruce. R. M. Brown. Apr., 1929.
58. Potato breeding methods: II, Selection in inbred lines. F. A. Krantz and A. E. Hutchins. Apr., 1929.
59. Susceptibility of wheat varieties and hybrids to Fusarial head blight in Minnesota. J. J. Christensen, E. C. Stakman, and F. R. Immer. Apr., 1929.
60. Forest possibilities of aspen lands in the Lake States. Joseph Kittredge, jr., and S. R. Gevorkiantz. May, 1929.
61. A preliminary account of the raspberry aphids. J. D. Winter. Sept., 1929.
62. Daily growth of the oat kernel and effect on germination of immaturity and controlled low temperatures. E. G. Booth. Sept., 1929.
63. A new method for estimating the true fat content of buttermilk. W. E. Petersen and E. O. Herreid. Feb., 1929.
64. Some of the factors influencing the growth of molds in butter. Harold Macy, Dec., 1929.

65. Mutation and hybridization in *Ustilago zeae*: Part I, Mutation. E. C. Stakman, J. J. Christensen, C. J. Eide, and Bjorn Peturson.— Part II, Hybridization. J. J. Christensen. Dec., 1929.
66. Identification of cultivated raspberries. J. D. Winter. Apr., 1930.
67. Studies on the nature of physiologic resistance to *Puccinia graminis tritici*. W. N. Ezekiel. Oct., 1930.
68. Inheritance studies in *Phaseolus vulgaris*. T. M. Currence. Aug., 1930.
69. A study of senescence in the red raspberry cane. W. G. Brierley. Sept., 1930.
70. Aspen availability, properties, and utilization. R. P. A. Johnson, Joseph Kittredge, Jr., and Henry Schmitz. Aug., 1930.
71. Factors that influence the development and survival of the ova of an ascarid roundworm, *Torocara canis* (Werner, 1782) Stiles, 1905, under field conditions. W. B. Owen. Sept., 1930.
72. Minnesota agriculture, indexes of prices, quantities, and cash incomes, 1910-27. A. G. Black and Dorothea Kittredge.
73. Studies of the test tube agglutination test for the diagnosis of Bang's disease (contagious abortion). C. P. Fitch, C. R. Donham, L. M. Bishop, and W. L. Boyd. Nov., 1930.
74. Physiologic specialization in *Fusarium* spp. causing headblight of small grains. Chih Tu. Dec., 1930.
75. The Coccinellidae (ladybird beetles) of Minnesota (Coleoptera). W. C. Stehr. Dec., 1930.

MISSISSIPPI AGRICULTURAL EXPERIMENT STATION, A. & M. COLLEGE

BULLETINS

267. Landscape gardening in home beautification. Wellington Kennedy. July, 1929.
268. Beef cattle production in Mississippi. G. S. Templeton. June, 1929.
269. Progress report on cost of production route in Jones County, Mississippi, 1928. L. E. Long and J. R. Allen. June, 1929.
270. Mule feeding experiments. G. S. Templeton. Aug., 1929.
271. Report of the Raymond branch experiment station, 1929. H. F. Wallace and J. L. Cooley, jr. Dec., 1929.
272. Report of the Holly Springs branch experiment station, 1929. C. T. Ames and O. B. Casanova. Dec., 1929.
273. Nitrogen fertilizers for tomato production. J. L. Cooley, jr. Jan., 1930.
274. Report of the South Mississippi branch experiment station. W. R. Perkins, W. S. Anderson, and W. W. Welborne. Dec., 1929.
275. Report from the Natchez branch experiment station on pecan work to December, 1929. S. J. Greer and W. T. Mallory. Dec., 1929.
276. Farm practices in south central Mississippi with suggested changes. L. E. Long and R. S. Kifer. Dec., 1929.
277. Comparison of one-year-old and "June-bud" peach stock for orchard planting. J. C. C. Price. July, 1930.
278. Comparison of roughage for finishing steers. D. S. Buchanan. July, 1930.
279. The production and storage of sweet potatoes. J. C. C. Price. Aug., 1930.
280. Propagation studies with the southern blueberry. L. M. Ware. Aug., 1930.
281. Grape varieties. J. C. C. Price. Aug., 1930.
282. The rural tax situation in Choctaw County, Miss., 1928. L. E. Long. Aug., 1930.
283. Grazing and feeding trials with corn and soybeans for pork production. P. G. Bedenbaugh. July, 1930.
284. Varieties of peaches. J. C. C. Price. Aug., 1930.
285. Report of the South Mississippi branch experiment station for 1930. J. C. Robert, W. W. Welborne, and J. L. Cooley, jr. Dec., 1930.
286. Report of the Holly Springs branch experiment station, 1930. T. F. McGehee and O. B. Casanova. Dec., 1930.
287. Report of the Raymond branch experiment station, 1930. H. F. Wallace. Dec., 1930.
288. Cotton variety summary, 1926-1930. J. F. O'Kelly and W. W. Hull. Dec., 1930.

TECHNICAL BULLETINS

17. Bacteriological effects of green manure, Study No. III. C. F. Briscoe and H. H. Harned. June, 1929.
18. Cotton inheritance studies: Lint percentage. J. F. O'Kelly and W. W. Hull. Sept., 1930.

MISSOURI AGRICULTURAL EXPERIMENT STATION, COLUMBIA

BULLETINS

264. The soils of Missouri. M. F. Miller and H. H. Krusekopf. Jan., 1929. Revision of 153.
265. Blackberries, raspberries, and dewberries. H. G. Swartwout. Jan., 1929.
266. Soybeans and soybean oil meal in swine rations. L. A. Weaver. Feb., 1929.
267. Developing new markets for Missouri butterfat. F. L. Thomsen and W. H. E. Reid. Feb., 1929.
268. The use of electricity on Missouri farms. R. R. Parks. Feb., 1929.
269. Land valuation, II. J. T. Waddill [and others]. Mar., 1929.
270. Testing fertilizers for Missouri farmers, 1928. L. D. Haigh. May, 1929.
271. The control of gullies. H. E. Uhland and J. C. Wooley. May, 1929.
272. How the experiment station solves farm problems: One year's work, agricultural experiment station (Report of the director, July 1, 1927, to June 30, 1928). F. B. Mumford [and others]. May, 1929.
273. Economic position of the grape industry in Missouri. F. L. Thomsen and G. B. Thorne. July, 1929.
274. Selecting the dairy sire. A. C. Ragsdale and Warren Gifford. Sept., 1929.
275. Care, feeding and management of the dairy sire. A. C. Ragsdale and Warren Gifford. Oct., 1929.
276. Testing fertilizers, spring, 1929. F. B. Mumford and L. D. Haigh. Oct., 1929.
277. The cooperative marketing of fruits and vegetables on the St. Louis market. F. L. Thomsen. Dec., 1929.
278. Columbia oats, a new variety for Missouri. L. J. Stadler and R. T. Kirkpatrick. Jan., 1930.
279. Time of harvesting soybeans, in relation to soil improvement and protein content of the hay. R. E. Uhland. Feb., 1930.
280. Korean lespedeza in Missouri. W. C. Etheridge, C. A. Helm, and B. M. King. Feb., 1930.
281. Feeding dairy cattle. A. C. Ragsdale. Mar., 1930.
282. Legume inoculation. W. A. Albrecht. Mar., 1930.
283. Fruit pollination. A. E. Murneek. Mar., 1930.
284. Registration, labeling, inspection and sale of commercial fertilizers, 1929. L. D. Haigh. Apr., 1930.
285. Experiment station research: [Report of the agricultural experiment station for the year ending June 30, 1929.] F. B. Mumford [and others]. Apr., 1930.
286. The combine harvester in Missouri. M. M. Jones. May, 1930.
287. Production and feeding of silage. L. J. Stadler, M. M. Jones, C. W. Turner, and P. M. Bernard. July, 1930.
288. The influence of various protein concentrates on egg production. H. L. Kempster. Aug., 1930.
289. Coccidiosis in fowls. A. J. Durant. Aug., 1930.
290. Prevention and eradication of infectious abortion in cattle. J. W. Connaway. Aug., 1930.
291. The Missouri farmers' tax position. C. H. Hammar. Aug., 1930.
292. Inspection and analysis of commercial fertilizers, spring, 1930. F. B. Mumford and L. D. Haigh. Oct., 1930.
293. How certain methods of cooking affect the quality and palatability of beef. J. A. Cline, E. A. Trowbridge, M. T. Foster, and H. E. Fry. Nov., 1930.
294. Growing orchard grass in south Missouri. C. A. Helm. Nov., 1930.
295. Leukemia in fowls. A. J. Durant. Dec., 1930.

RESEARCH BULLETINS

122. The relation of inadequate rations to the weights of the internal organs of chicks. A. G. Hogan, C. L. Shrewsbury, and H. L. Kempster. Apr., 1929.
123. Retarded growth and mature size of beef steers. A. G. Hogan. July, 1929.
124. The effect of inadequate rations on the composition of the blood and of the bone of chicks. A. G. Hogan, C. L. Shrewsbury, and H. L. Kempster. Aug., 1929.
125. Contacts in a rural community. H. J. Burt. Aug., 1929.
126. The effect of different pasteurization temperatures on several of the physical properties of milk. W. H. E. Reid. Sept., 1929.
127. The effect of homogenization at different pressures on the physical properties of an ice cream mixture and the resulting ice cream. W. H. E. Reid and G. R. Skinner. Sept., 1929.

128. The effect of processing ice cream mixtures at different pressures when the milk solids not fat content is varied. W. H. E. Reid and E. R. Garrison. Oct., 1929.
129. The effect of the amount and nature of exchangeable cations on the structure of a colloidal clay. L. D. Bayer. Oct., 1929.
130. A statistical study of the size of fat globules in cows' milk. C. W. Turner and A. C. Haskell. Nov., 1929.
131. A classification of soybeans. W. C. Etheridge, C. A. Helm, and B. M. King. Dec., 1929.
132. Legume bacteria with reference to light and longevity. W. L. Albrecht and L. M. Turk. Jan., 1930.
133. Blackhead in turkeys, surgical control by cecal ablation. A. J. Durant. Mar., 1930.
134. The effect of different homogenization processes on the physical properties of an ice cream mixture and the resulting ice cream when the percentage of fat is varied and the solids not fat remain constant. W. H. E. Reid and L. B. Russell. Mar., 1930.
135. Factors influencing properties of fermented reconstructed milk. W. H. E. Reid and F. F. Welch. Mar., 1930.
136. Studies on the pathology and physiology of the cecal pouches of turkeys: II, The utilization of food by turkeys with ablated ceca. J. E. Hunter, A. J. Durant, and A. G. Hogan. Mar., 1930.
137. Factors involved in buying Missouri cream. F. L. Thomsen and W. H. E. Reid. Mar., 1930.
138. Apple pollination investigations. A. E. Murneek, W. W. Yocum, and E. N. McCubbin. Apr., 1930.
139. A partial analysis of the Missouri pig survey reports. F. L. Thomsen and Preston Richards. May, 1930.
140. The anatomy of the mammary gland of cattle: I, Embryonic development. C. W. Turner. June, 1930.
141. Growth and development, with special reference to domestic animals: XIII, The influence of certain geographical and historical conditions on the physical development of Lombardy. Brown-Swiss, Britanny, dairy Shorthorn, Ayrshire, and beef Shorthorn breeds of cattle. John Ashton. June, 1930.
142. Growth and development, with special reference to domestic animals: XIV (a) Measurements of growing Holstein and Jersey cattle on Missouri farms. A. C. Ragsdale and M. J. Regan.— (b) Prediction charts for growth of cattle. Samuel Brody and A. C. Ragsdale. June, 1930.
143. Growth and development, with special reference to domestic animals: XV, Energy and nitrogen metabolism during the first year of postnatal life. Samuel Brody [and others]. June, 1930.
144. The mode of inheritance of yearly butterfat production, an analysis of the progeny performance of Holstein-Friesian sires; genealogy tables of Holstein-Friesian sires. Warren Gifford. June, 1930.
145. The effect of the estrus producing hormone on the growth of the mammary gland. C. W. Turner and A. H. Frank. July, 1930.
146. Marketing stock hogs in Missouri. Preston Richards and F. L. Thomsen. July, 1930.
147. The inheritance of body weight in relation to milk secretion. C. W. Turner. Aug., 1930.
148. Social, economic, and homemaking factors in farm living. R. C. Hill, E. L. Morgan, M. V. Campbell, and O. R. Johnson. July, 1930.
149. Growth and development, with special reference to domestic animals: XVI, The influence of temperature and breeding upon the rate of growth of chick embryos. E. W. Henderson. Sept., 1930.
150. A study of the estrus producing hormone in the urine of cattle during pregnancy. C. W. Turner, A. H. Frank, C. H. Lomas, and C. W. Nibler. Sept., 1930.
151. Variations in local prices for farm products and supplies in Missouri. F. L. Thomsen. Nov., 1930.
152. A study on the influence of climate upon the nitrogen and organic matter content of the soil. Hans Jenny. Nov., 1930.

MONTANA AGRICULTURAL EXPERIMENT STATION, BOZEMAN

BULLETINS

218. The McIntosh apple industry in western Montana. S. E. Johnson. Jan., 1929.
219. The county library in Montana. J. W. Barger. Jan., 1929.
220. An economic analysis of production problems in the Bitter Root Valley. S. E. Johnson. Jan., 1929.

221. Rural community halls in Montana. J. W. Barger. Jan., 1929.
222. The influence of fallow on yield and protein content of wheat. Edmund Burke and R. M. Pinckney. July, 1929.
223. Some effects of temperature and moisture upon *Melanoplus mexicanus mexicanus* Saussure and *Camnula pellucida* Scudder (Orthoptera). J. R. Parker. Jan., 1930.
224. The rural community club in Montana. J. W. Barger. Jan., 1930.
225. Field studies of the pale western cutworm (*Porosagrotis orthogonia* Morr.). W. C. Cook. Feb., 1930.
226. Current problems of Montana farmers' elevators. E. J. Bell, jr. Feb., 1930.
227. Potato diseases in Montana. H. E. Morris and P. A. Young. Mar., 1930.
228. Soils of Blaine County, soil reconnaissance of Montana, preliminary report. L. F. Gieseke. Mar., 1930.
229. Tractor hitches. H. E. Murdock. May, 1930.
230. The combined harvester-thresher in Montana. A. E. Starch and R. M. Merrill. June, 1930.
231. Researches on potato-virus diseases in Montana. P. A. Young and H. E. Morris. June, 1930.
232. Successful farming practices in the Billings beet region. E. J. Bell, jr. Sept., 1930.
233. Dry-land shelter-belt tests at the Judith Basin branch station. I. J. Jensen and F. M. Harrington. Oct., 1930.
234. Wheat varieties under irrigation. LeRoy Powers. Oct., 1930.
235. Dry-land shelter-belt tests at the Northern Montana branch station. F. M. Harrington and G. W. Morgan. Oct., 1930.
236. Pasture crops for spring pigs, their value and use. W. E. Joseph. Dec., 1930.
237. An economic analysis of production problems on the Flathead irrigation project. S. E. Johnson. Dec., 1930.
238. Montana insect pests for 1929 and 1930, the Twenty-third report of the state entomologist of Montana. R. A. Cooley. Dec., 1930.
239. Present and prospective development of farming systems in western Montana. S. E. Johnson. Dec., 1930.

NEBRASKA AGRICULTURAL EXPERIMENT STATION, LINCOLN

BULLETINS

233. Nebraska tractor tests, 1920-1928. Jan., 1929.
234. Water carried for household purposes on Nebraska farms. M. R. Clark and Greta Gray. May, 1929.
235. Unit electric plants for Nebraska farms, a survey of present conditions and a study of types of plants. E. E. Brackett and E. B. Lewis. May, 1929.
236. Rural electric service supplied from central stations in Nebraska in 1927. E. E. Brackett and E. B. Lewis. July, 1929.
237. Cane versus spur pruning for grapes. C. C. Wiggans. Nov., 1929.
238. The routine and seasonal work of Nebraska farm women. M. R. Clark and Greta Gray. Jan., 1930.
239. (North Platte experiment substation Bul. 28.) The use of alfalfa pasture for fattening cattle. W. P. Snyder. Mar., 1930.
240. Alfalfa wilt in Nebraska. G. L. Peltier and J. H. Jensen. Apr., 1930.
241. (Valentine experiment substation Bul. 3.) Clover in the subirrigated meadows of the Sand Hills. E. M. Brouse. Apr., 1930.
242. Nebraska tractor tests, 1920-1929. Mar., 1930.
243. (North Platte experiment substation Bul. 29.) Pork production at the North Platte substation. W. P. Snyder. Apr., 1930.
244. Types of farming in Nebraska. Harold Hedges and F. F. Elliott. May, 1930.
245. Water supply and sewage disposal systems for farm homes. I. D. Wood and E. B. Lewis. May, 1930.
246. Testing ice cream for butterfat. L. K. Crowe. June, 1930.
247. The relation of environmental conditions in poultry houses to winter egg production. C. W. Smith. Aug., 1930.
248. The cost of clothing the Nebraska farm family. J. O. Rankin. Aug., 1930.
249. The mechanical dairy cooler on Nebraska farms, a study of four walk-in type installations. E. E. Brackett and E. B. Lewis. Sept., 1930.
250. Raising early lambs from aged western ewes. A. D. Weber. Sept., 1930.
251. Barley as hog feed. W. J. Loeffel. Oct., 1930.
252. Sex and age as factors in cattle feeding. H. J. Gramlich and R. R. Thalman. Oct., 1930.

RESEARCH BULLETINS

43. On the nature and cause of "the walking disease" of northwestern Nebraska (*neuroblosis et cirrhosis hepatitis enzootica*). Leunis Van Es, L. R. Cantwell, H. M. Martin, and J. Kramer. July, 1929.
44. Seed potato treatment tests for control of scab and *Rhizoctonia*. R. W. Goss and H. O. Werner. Dec., 1929.
45. Effect of cultural methods and maturity upon the seed value of eastern Nebraska potatoes. H. O. Werner. Dec., 1929.
46. Economic aspects of contagious abortion in a dairy herd. R. F. Morgan and H. P. Davis. May, 1930.
47. The symptoms of spindle tuber and unmottled curly dwarf of the potato. R. W. Goss. May, 1930.
48. A study of kerosene cook stoves. E. B. Snyder. July, 1930.
49. The incidence of avian tuberculosis in mammals other than swine. Leunis Van Es and H. M. Martin. Aug., 1930.
50. The food habits of the ring-necked pheasant in central Nebraska. M. H. Swenk. Nov., 1930.
51. Breeding winter wheat for resistance to stinking smut (*Tilletia levis* and *Tilletia tritici*). T. A. Kieselbach and Arthur Anderson. Dec., 1930.
52. The relative susceptibility of alfalfas to wilt and cold. G. L. Peltier and H. M. Tysdal. Dec., 1930.

NEVADA AGRICULTURAL EXPERIMENT STATION, RENO

BULLETINS

116. Simplified methods of calculating dairy rations. F. B. Headley. June, 1929.
117. Factors affecting the cost of production of alfalfa hay in western Nevada. F. B. Headley and R. M. Clawson. Nov., 1929.
118. Efficiency in dairying. F. B. Headley and Cruz Venstrom. June, 1930.
119. Feeding experiments with dairy cows. F. B. Headley. Aug., 1930.
120. Economic history of the Newlands irrigation project. F. B. Headley and Cruz Venstrom. Oct., 1930.

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION, DURHAM

BULLETINS

237. Inspection of commercial fertilizers for 1928, made for the State department of agriculture. T. G. Phillips, T. O. Smith, and F. S. Schlenker. Jan., 1929.
238. New Hampshire agricultural experiment station report for 1928. J. C. Kendall. Feb., 1929.
239. Potato production costs in New Hampshire. M. F. Abell. May, 1929.
240. Simplified technique and apparatus for measuring energy requirements of cattle. E. G. Ritzman and F. G. Benedict. May, 1929.
241. White Mountain demand for vegetables and poultry products. E. H. Rinear. May, 1929.
242. The energy and the protein content of foods regularly eaten in a college community. F. G. Benedict and A. G. Farr. May, 1929.
243. Mosquitoes of New Hampshire, a preliminary report. P. R. Lowry. June, 1929.
244. Electric household refrigeration. W. T. Ackerman. June, 1929.
245. Inspection of commercial feeding stuffs, 1929, made for the State department of agriculture. T. G. Phillips, T. O. Smith, and F. S. Schlenker. July, 1929.
246. Results of seed tests for 1929, made for the State department of agriculture. M. G. Eastman and B. I. Glidden. Sept., 1929.
247. The white pine weevil in New Hampshire. C. C. Plummer and A. E. Pillsbury. Oct., 1929.
248. Inspection of commercial fertilizers for 1929, made for the State department of agriculture. T. G. Phillips, T. O. Smith, and J. C. Fritz. Dec., 1929.
249. Roadside marketing in New Hampshire. M. G. Eastman. Dec., 1929.
250. Agricultural experiments, 1929, report of the New Hampshire agricultural experiment station. J. C. Kendall. Feb., 1930.
251. Operating costs of retail grain stores in New Hampshire. E. H. Rinear. July, 1930.
252. Results of seed tests for 1930, made for the State department of agriculture. B. I. Glidden. Sept., 1930.

253. Inspection of commercial feeding stuffs, 1930, made for the State department of agriculture. T. G. Phillips, T. O. Smith, and J. C. Fritz. Aug., 1930.
254. Inspection of commercial fertilizers for 1930, made for the State department of agriculture. T. G. Phillips, T. O. Smith, and S. J. Fisher. Dec., 1930.

TECHNICAL BULLETINS

39. Studies of contact insecticides: I, Surface tension, surface activity, and wetting ability as factors in the performance of contact insecticides. W. C. O'Kane, W. A. Westgate, L. C. Glover, and P. R. Lowry. Feb., 1930.
40. Studies of contact insecticides: II, Lime sulphur in relation to San Jose and oyster shell scales. W. C. O'Kane and J. G. Conklin. May, 1930.
41. Some effects of defoliation on fruit spur composition and fruit bud formation in the Oldenburg apple. G. F. Potter, H. R. Kraybill, S. W. Wentworth, J. T. Sullivan, and P. T. Blood. June, 1930.
42. Composition and fruit bud formation in non-bearing spurs of the Baldwin apple. G. F. Potter and T. G. Phillips. June, 1930.
43. The energy metabolism of sheep. E. G. Ritzman and F. G. Benedict. June, 1930.
44. The relation of hydrophilic colloids to hardness in the apple as shown by the dye adsorption test. Stuart Dunn. Aug., 1930.

NEW JERSEY AGRICULTURAL EXPERIMENT STATIONS, NEW BRUNSWICK

BULLETINS

482. Fertilizer registrations for 1929. C. S. Cathcart. Jan., 1929.
483. Winter wheat tests in New Jersey. H. B. Sprague and E. E. Evaul. May, 1929.
484. Results of seed and legume inoculant inspection for 1928. J. G. Fiske. Jan., 1929.
485. Analyses of materials sold as insecticides and fungicides during 1929. C. S. Cathcart and R. L. Willis. Oct., 1929.
486. Annual report of the Department of sewage disposal, July 1, 1927-June 30, 1928. Willem Rudolfs [and others]. Apr., 1929.
487. Farmers' cooperation in New Jersey, 1926. C. B. Howe. Oct., 1929.
488. Analyses of commercial feeding stuffs and registrations for 1929. C. S. Cathcart. June, 1929.
489. Studies on Raritan River pollution, 1927-28. Willem Rudolfs, Houhanness Heukeleian, J. B. Lackey, P. J. A. Zeller, and I. O. Lacy. Oct., 1929.
490. Analyses of commercial fertilizers, fertilizer supplies, and home mixtures for 1929. C. S. Cathcart. Oct., 1929.
491. Cranberry false blossom and the blunt-nosed leafhopper. C. S. Beckwith and S. B. Hutton. Dec., 1929.
492. Results of seed and legume inoculant inspection for 1929. J. G. Fiske. Jan., 1930.
493. Analyses of commercial fertilizers and ground bone; analyses of agricultural lime, 1929. C. S. Cathcart. Dec., 1929.
494. Development and ripening of peaches as correlated with physical characteristics, chemical composition, and histological structure of the fruit flesh: III, Macrochemistry. G. T. Nightingale, R. M. Addoms, and M. A. Blake. Feb., 1930.
495. Fertilizer registrations for 1930. C. S. Cathcart. Jan., 1930.
496. Effect of chemicals upon the behavior of mosquitoes. Willem Rudolfs. Mar., 1930.
497. Experiments with turf grasses in New Jersey. H. B. Sprague and E. E. Evaul. Mar., 1930.
498. The influence of lime in vegetable growing. A. W. Blair and A. L. Prince. Mar., 1930.
499. Some effects of potassium deficiency on the histological structure and nitrogenous and carbohydrate constituents of plants. G. T. Nightingale, L. G. Schermerhorn, and W. R. Robbins. Apr., 1930.
500. Action of enzymes on sewage solids. N. S. Chamberlin. Mar., 1930.
501. Effect of fertilizers on cranberry land. C. S. Beckwith. June, 1930.
502. Annual report of the Department of sewage disposal July 1, 1928-June 30, 1929. Willem Rudolfs [and others]. Apr., 1930.
503. The motor truck as a carrier of fruits and vegetables to Greater New York. B. M. Price. June, 1930.
504. Increasing the color of cranberries after removal from the vines. B. R. Fudge. Oct., 1930.
505. Analyses of commercial feeding stuffs and registrations for 1930. C. S. Cathcart. June, 1930.
506. The consumption of dairy products in six New Jersey townships. W. C. Waite and C. B. Howe. June, 1930.

507. Development and ripening of peaches as correlated with physical characteristics, chemical composition, and histological structure of the fruit flesh: II, Histology and microchemistry. R. M. Addoms, G. T. Nightingale, and M. A. Blake. Sept., 1930.
508. Creamery inspection in New Jersey, ninth annual report. H. H. Tucker. Sept., 1930.
509. Premature heading of cauliflower as associated with the chemical composition of the plant. W. R. Robbins, G. T. Nightingale, and L. G. Schermerhorn. Jan., 1931.
510. Some studies of the larval parasites of the oriental peach moth (*Laspeyresia molesta* Busck). B. F. Driggers. Oct., 1930.
511. Length of the fruit development period of the Elberta and some other varieties of peaches. M. A. Blake. Oct., 1930.
512. Experiments with alfalfa, clover, and timothy for hay in New Jersey. H. B. Sprague, E. E. Evaul, H. W. Reuszer, and N. F. Farris. Nov., 1930.
513. Analyses of materials sold as insecticides and fungicides during 1930. C. S. Cathcart and R. L. Willis. Oct., 1930.
514. Analyses of commercial fertilizers, fertilizer supplies, and home mixtures for 1930. C. S. Cathcart. Nov., 1930.
515. The milk supply of the New Jersey metropolitan market, including some comments concerning sales in the north shore and rural markets. C. B. Howe. Nov., 1930.

NEW MEXICO AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE

BULLETINS

171. Almonds. A. B. Fite. Jan., 1929.
172. The preparation and use of oil sprays. J. R. Eyer and R. F. Crawford. Jan., 1929.
173. The poisoning of livestock by *Drymaria pachyphylla*. J. L. Lantow. Feb., 1929.
174. Plum variety test. A. B. Fite and Fabian Garcia. Mar., 1929.
175. The composition of cottonseed produced in New Mexico. C. W. Botkin. Apr., 1929.
176. Crop production at the Tucumcari field station. D. R. Burnham and H. J. Clemmer. May, 1929.
177. New Mexico egg storage studies, Part I. A. L. Walker, L. N. Berry, and E. E. Anderson. June, 1929.
178. (Technical.) The digestibility of cottonseed meal as a supplemental feed for range cattle in New Mexico. W. E. Watkins. July, 1929.
179. Cottonseed meal with various roughages as fattening rations for lambs. R. F. Cox.—Analyses of cottonseed meal and cottonseed hulls for gossypol. W. E. Watkins. July, 1929.
180. Cabbage fertilizer experiments. A. B. Fite. Jan., 1930.
181. Cotton varieties. J. C. Overpeck and W. T. Conway. Mar., 1930.
182. Climate as it affects crops and ranges in New Mexico. C. E. Linney, Fabian Garcia, and E. C. Hollinger. Mar., 1930.
183. The relative value of cottonseed meal and tankage for egg production. L. N. Berry. May, 1930.
184. The ground water of Middle Rio Grande Valley and its relation to drainage. D. W. Bloodgood. May, 1930.
185. Supplemental feeding of range cattle. J. L. Lantow. June, 1930.
186. A five-year economic study of 125 farms in Curry and Roosevelt Counties, New Mexico, Part I of Economics of agriculture on dry-land farms in eastern New Mexico. L. H. Hauter, A. L. Walker, and O. V. Wells. June, 1930.
187. Production requirements, costs, and returns from dry-land farming in eastern New Mexico, Part II of Economics of agriculture on dry-land farms in eastern New Mexico. L. H. Hauter, A. L. Walker, and O. V. Wells. June, 1930.

NEW YORK CORNELL AGRICULTURAL EXPERIMENT STATION, ITHACA

BULLETINS

473. The cost of handling fluid milk and cream in country plants. C. K. Tucker. Jan., 1929.
474. The fumigation of greenhouses to destroy insect pests. G. W. Herrick and G. H. Griswold. Feb., 1929.
475. The production and marketing of New York market peas. Dilworth Walker. May, 1929.
476. The utilization of marginal lands. William Allen. May, 1929.

477. Composition and body of butter. E. S. Guthrie. May, 1929.
478. An economic study of farm buildings in New York. I. F. Hall. May, 1929.
479. The relationships between roads and agriculture in New York. J. L. Tennant. May, 1929.
480. Premature seeding of celery. H. C. Thompson. May, 1929.
481. The clover-flower midge (*Dasyneura leguminicola* Lintner). L. F. Wehrle. May, 1929.
482. Soil and field-crop management for Yates County, New York. H. O. Buckman, H. P. Cooper, and F. B. Howe. June, 1929.
483. Economic studies of dairy farming in New York: IX, Grade B milk with cash crops and mixed hay roughage, crop year 1925 with five-year summary. J. C. Neethling. June, 1929.
484. A comparison of the cost of maintenance of large and of small county boards in the United States, a study in the cost of government. M. S. Kendrick. June, 1929.
485. Farm-property taxation in New York. I. J. Call. June, 1929.
486. An economic study of the collection of milk at country plants in New York. Leland Spencer. June, 1929.
487. Rural population, Tompkins and Schuyler Counties, New York, 1925. B. L. Melvin, June, 1929.
488. A study of some factors affecting seed-stalk development in cabbage. J. C. Miller. June, 1929.
489. The clover-leaf caterpillar (*Olethreutes cespitana* Hübner) and the clover-leaf tyer (*Anchylopera angulifasciana* Zeller). L. P. Wehrle. June, 1929.
490. Abandoned farm areas in New York. L. M. Vaughan. July, 1929.
491. Varietal experiments with soybeans in New York. R. G. Wiggans. July, 1929.
492. Organization of the sewing center in the home. E. M. Cushman. Aug., 1929.
493. Village service agencies, New York, 1925. B. L. Melvin. Aug., 1929.
494. Some facts concerning the distribution of fruits and vegetables by wholesalers and jobbers in large terminal markets. M. P. Rasmussen. Oct., 1929.
495. Apple varieties: Prices, yields, and acreages. G. P. Scoville and T. E. LaMont Dec., 1929.
496. An economic study of farm electrification in New York, with a discussion of rural electrification in the provinces of Quebec and Ontario, Canada. R. F. Bucknam. Dec., 1929.
497. Pollination and other factors affecting the set of fruit, with special reference to the apple. L. H. MacDaniels and A. J. Heinicke. Dec., 1929.
498. Protecting orchard crops from diseases and insects. C. R. Crosby, W. D. Mills, and W. E. Blauvelt. Dec., 1929.
499. The effect of dusting-sulfur upon the germination of pollen and the set of fruit of the apple. L. H. MacDaniels and J. R. Furr. Feb., 1930.
500. Legumes as a source of available nitrogen in crop rotations. T. L. Lyon. Feb., 1930.
501. Social relationships of Slaterville Springs, Brooktondale area, Tompkins County, New York. G. A. Bakkum and B. L. Melvin. Mar., 1930.
502. An economic study of food consumed by farm and village families in central New York. F. M. Williams and J. E. Lockwood. Apr., 1930.
503. The molting factor in judging fowls for egg production. D. R. Marble. Apr., 1930.
504. A partial sociological study of Dryden, New York, with special emphasis on its historical development. G. M. Kensler and B. L. Melvin. May, 1930.
505. Some factors affecting the cost of operation of retail feed stores in New York State. Whiton Powell. June, 1930.
506. An economic study of tractors on New York farms. C. W. Gilbert. June, 1930.
507. Motor trucks on New York farms. C. W. Gilbert. June, 1930.
508. Lead-arsenate experiments on the germination of weed seeds. W. C. Muenscher. June, 1930.
509. Results of sweet-corn suckering experiments on Long Island. H. C. Thompson, H. S. Mills, and P. H. Wessels. June, 1930.
510. Growing onions on the muck soils of New York. J. E. Knott. Sept., 1930.
511. The collection of taxes by the state of New York, and the division of these revenues with units of local government. M. S. Kendrick. Sept., 1930.
512. The money income of farm boys in a southern New York dairy region. H. W. Beers. Sept., 1930.
513. The chemical composition of New York soils. J. A. Bizzell. Oct., 1930.
514. Soil and field-crop management for Chenango County, New York. A. F. Gustafson, H. O. Buckman, and H. P. Cooper. Dec., 1930.

MEMOIRS

121. Variation and correlation in the appendages of the honeybee. E. F. Phillips. Feb., 1929.
122. The effect of freezing on the catalase activity of apple fruits. D. B. Carrick. Mar., 1929.
123. Three rust diseases of the apple. H. E. Thomas and W. D. Mills. Mar., 1929.
124. The Rhizoctonia damping-off of conifers, and its control by chemical treatment of the soil. J. S. Wiant. Apr., 1929.
125. Inheritance and linkage relations of virescent seedlings in maize. I. F. Phipps. Aug., 1929.
126. Effect of storage in finely divided feeds upon the stability of the D vitamin of cod-liver oil. L. C. Norris, G. F. Heuser, and H. S. Wilgus. Nov., 1929.
127. The bacterial diseases of the bean, a comparative study. W. H. Burkholder. Apr., 1930.
128. Studies on fungicides: I, Concepts and terminology. H. H. Whetzel and S. E. A. McCallan.— II, Testing protective fungicides in the laboratory; III, the solvent action of spore excretions and other agencies on protective copper fungicides. S. E. A. McCallan. May, 1930.
129. Genetical and cytological studies of Mendelian asynapsis in *Zea mays*. G. W. Beadle. May, 1930.
130. A study of meadow-crop diseases in New York. J. G. Horsfall. June, 1930.
131. Some cold-storage and freezing studies on the fruit of the vinifera grape. D. B. Carrick. Aug., 1930.
132. Biochemistry and biophysics of the developing hen's egg: I, Influence of humidity. A. L. Romanoff. Aug., 1930.
133. The effect of spiral ringing on solute translocation and the structure of the regenerated tissues of the apple. L. H. MacDaniels and O. F. Curtis. Oct., 1930.
134. Lysimeter experiments: III, Records for tanks 3 to 12 during the years 1910 to 1924 inclusive. T. L. Lyon, J. A. Bizzell, B. D. Wilson, and E. W. Leland. Nov., 1930.

NEW YORK STATE AGRICULTURAL EXPERIMENT STATION, GENEVA

BULLETINS

562. High-nicotine tobacco. R. C. Collison, J. D. Harlan, and L. R. Streeter. Jan., 1929.
563. Fruit regions and varieties of eastern New York. H. B. Tukey. Feb., 1929.
564. Potato seed treatment experiments on Long Island with special reference to the organic mercury instant dips. E. E. Clayton. Feb., 1929.
565. The quality of packet vegetable seed on sale in New York in 1926, 1927, and 1928. M. T. Munn, O. M. Hoefle, and M. E. Woodbridge. Mar., 1929.
566. I, The microscopic appearance of unpasteurized market milk and cream. R. S. Breed. Mar., 1929. Revision of Tech. Bul. 120.
567. Bacterial counts in sanitary milk control. R. S. Breed. Mar., 1929.
568. The sanitary significance of leucocytes in milk. R. S. Breed. Apr., 1929.
569. Seedling fruit stocks. H. B. Tukey. Apr., 1929.
570. Control of spoilage in tomato products. C. S. Pederson and R. S. Breed. Aug., 1929.
571. Bacteria that survive and grow during the pasteurization of milk and their relation to bacterial counts. P. S. Prickett and R. S. Breed. Aug., 1929.
572. Limitations as to sunlight requirements of hens. W. P. Wheeler. Aug., 1929.
573. Artificial manure from straw. R. C. Collison and H. J. Conn. Aug., 1929.
574. Five years' results with fertilizers in three Hudson River Valley apple orchards. H. B. Tukey and L. C. Anderson. Oct., 1929.
575. Washing fruit to remove spray residue in the Hudson Valley. E. V. Shear. Oct., 1929.
576. Studies of the black-rot or blight disease of cauliflower. E. E. Clayton. Nov., 1929.
577. Pollination of fruit trees. Richard Wellington, A. B. Stout, Olav Einset, and L. M. Van Alstyne. Nov., 1929.
578. New or noteworthy fruits, X. G. H. Howe. Dec., 1929.
579. Spray residues. L. R. Streeter and S. W. Harman. Dec., 1929.
580. Geneva, a greenhouse cucumber that develops fruit without pollination. L. R. Hawthorn and Richard Wellington. Feb., 1930.
581. Electric cooling of milk on the farm. J. C. Marquardt and A. C. Dahlberg. Feb., 1930.
582. The rosy aphid in relation to spray practices in 1929. P. J. Parrott and Hugh Glasgow. Feb., 1930.

583. Responses to light of the bud moth and leaf roller. D. L. Collins and M. W. Nixon. Feb., 1930.
584. Commercially prepared infant foods. G. J. Hucker and A. M. Hucker. Oct., 1930.
585. Straining milk on the farm. A. C. Dahlberg. Oct., 1930.
586. Combatting damping-off of tomatoes by seed treatment. J. G. Horsfall. Oct., 1930.
587. The quality of packet vegetable seed on sale in New York in 1929 and 1930. M. T. Munn, O. H. Sipple, and M. E. Woodbridge. Dec., 1930.
588. Filberts. G. L. Slate. Dec., 1930.
589. A new method for enzymic clarification of unfermented apple juice. Z. I. Kertesz. Dec., 1930.

TECHNICAL BULLETINS

148. Control measures for cucumber beetles. H. C. Huckett. Mar., 1929.
149. A preliminary study of the unicorn plants (Martyniaceae). G. P. Van Eseltine. Mar., 1929.
150. The types of organisms found in spoiled tomato products. C. S. Pederson. July, 1929.
151. The fermentation of glucose, fructose and arabinose by organisms from spoiled tomato products. C. S. Pederson. July, 1929.
152. Chemical studies of grape pigments: V, The anthocyanins in Ives grapes. R. L. Shriner and R. J. Anderson. July, 1929.
153. The number and type of bacteria in commercially prepared infant foods. G. J. Hucker and A. M. Hucker. Aug., 1929.
154. The sanitary control of commercially prepared infant foods. G. J. Hucker and A. M. Hucker. Aug., 1929.
155. The Grindrod impact sterilizer. G. J. Hucker and A. M. Hucker. Aug., 1929.
156. VI, The control of bacteria that grow during pasteurization. M. W. Yale. Sept., 1929.
157. The creaming of raw and pasteurized milk. A. C. Dahlberg and J. C. Marquardt. Oct., 1929.
158. VII, The udder as a possible source of thermophilic bacteria. P. A. Hansen. Oct., 1929.
159. Cross-unfruitfulness in the apple. Olav Einset. Apr., 1930.
160. The fineness of ground sulfur sold for dusting and spraying. L. R. Streeter and W. H. Rankin. Apr., 1930.
161. A comparison of aging periods for ice cream mixes. J. C. Henning. Apr., 1930.
162. Open pollination vs. hand pollination of pollen-sterile grapes. Olav Einset. July, 1930.
163. The Eriophyidae of New York: II, The maple mites. H. E. Hodgkiss. July, 1930.
164. Variability and size relations in apple trees. R. C. Collison and J. D. Harlan. July, 1930.
165. The bacterial flora of aseptically drawn milk. W. Dorner. July, 1930.
166. Lysimeter investigations: I, Nitrogen and water relations of crops in legume and non-legume rotations. R. C. Collison and J. E. Mensching. July, 1930.
167. Studies on the Coccaceae: XVI, The genus *Leuconostoc*. G. J. Hucker and C. S. Pederson. July, 1930.
168. Floral changes in the fermentation of sauerkraut. C. S. Pederson. July, 1930.
169. The effect of pure culture inoculation on the quality and chemical composition of sauerkraut. C. S. Pederson. Sept., 1930.
170. *Xenia* and *metaxenia* in apples. B. R. Nebel. Dec., 1930.
171. Aphids as vectors of leafroll among sprouting potato tubers. F. C. Stewart and Hugh Glasgow. Dec., 1930. Popular edition is Circ. 119.
172. Influence of various non-nitrogenous compounds on the growth of certain bacteria in soils of low productivity. H. J. Conn and M. A. Darrow. Dec., 1930.
173. Preparation of soil profiles for exhibition and soil study. R. C. Collison and J. D. Harlan. Dec., 1930.

NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE
STATION, RALEIGH

BULLETINS

263. Approved practices for sweet potato growers. H. B. Mann, R. F. Poole, and Robert Schmidt. Feb., 1929.
264. Causes of poultry mortality in North Carolina. R. S. Dearstyne, B. F. Kaupp, and H. S. Wilfong. Mar., 1929.
265. The nematode disease of sweet potatoes. R. F. Poole and Robert Schmidt. Apr., 1929.

266. Effects of synthetic nitrogen and concentrated fertilizers on cotton and sweet potatoes. J. J. Skinner, C. B. Williams, and H. B. Mann. May, 1929.
267. Farm income and taxation in North Carolina. G. W. Forster, H. W. Hawthorne, G. S. Klemmedson, and H. H. Wooten. June, 1929.
268. Control of oat smut by seed treatment. S. G. Lehman and G. W. Fant. Oct., 1929.
269. Farm family living among white owner and tenant operators in Wake County, 1926. W. A. Anderson. Sept., 1929.
270. Farm credit in North Carolina, its cost, risk and management. D. L. Wickens and G. W. Forster. Apr., 1930.
271. Credit problems of North Carolina cropper farmers. H. H. Wooten. May, 1930.
272. Cost of raising pigs to weaning age. E. H. Hostetler, R. E. Nance, and J. E. Foster. May, 1930.
273. A control for sweet potato wilt or stem rot. R. F. Poole. May, 1930.
274. A control for sweet potato scurf. R. F. Poole. May, 1930.
275. Migration of sons and daughters of white farmers in Wake County, 1929. W. A. Anderson and C. P. Loomis. June, 1930.
276. A coöperative marketing manual. J. G. Knapp. Dec., 1930.

TECHNICAL BULLETINS

35. A chemical control for sweet potato wilt or stem rot. R. F. Poole and J. W. Woodside. Mar., 1929.
36. Study of bacillary white diarrhea (pullorum disease). R. S. Dearstyne, B. F. Kaupp, and H. S. Wilfong. June, 1929.
37. Factors influencing living conditions of white owner and tenant farmers in Wake County, 1926. W. A. Anderson. Mar., 1930.
38. A chemical control of sweet potato scurf. R. F. Poole. May, 1930.
39. Investigations in the feeding of cottonseed meal to cattle. J. O. Halverson and F. W. Sherwood. Dec., 1930.

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE
STATION, FARGO

BULLETINS

225. The combined harvester-thresher in North Dakota. A. H. Benton [and others]. May, 1929.
226. Edgeley substation, report for years 1922 to 1928. O. A. Thompson. May, 1929.
227. Williston substation report, April 1, 1928, to March 31, 1929. E. G. Schollander. May, 1929.
228. Langdon substation report for 1927 and 1928. Victor Sturlaugson. May, 1929.
229. Hettinger substation report for 1928. C. H. Plath. May, 1929.
230. The northern pig, its habits, breeding, and management. J. H. Shepperd. July, 1929.
231. Varietal resistance of spring wheats to hant. W. E. Brentzel and R. W. Smith. July, 1929.
232. Prices of North Dakota farm products. O. M. Fuller and R. E. Willard. Dec., 1929.
233. Experiment station progress, report for biennium July 1, 1927, to June 30, 1929. P. F. Trowbridge [and others]. Mar., 1930.
234. Hettinger substation, report for 1929. C. H. Plath. May, 1930.
235. Williston substation report, April 1, 1929, to March 31, 1930. E. G. Schollander. May, 1930.
236. The chemical composition of some North Dakota pasture and hay grasses. T. H. Hopper and L. L. Nesbitt. June, 1930.
237. Ranch organization and management in western North Dakota. M. B. Johnson. June, 1930.
238. Cooperative marketing of dairy products. H. G. Anderson and A. H. Benton. Sept., 1930.
239. Veal in variety. Esther Latzke and Constance Leeb. Sept., 1930.
240. Chemical composition of the soils of McHenry County. T. H. Hopper and H. L. Walster. Nov., 1930.
241. Making use of our birds. O. A. Stevens. Dec., 1930. Revision of 195.
242. Standardizing methods of roasting beef in experimental cookery. Esther Latzke. Dec., 1930.
243. North Dakota weeds. O. A. Stevens. Dec., 1930. Revision of 162.

244. Control of quack grass by tillage: 1, A progress report, Langdon tillage project; 2, general suggestions on control of quack grass. T. E. Stoa, Victor Sturlaugson, and H. F. McColly. Dec., 1930.
245. The harvester-stacker method of harvesting grain in North Dakota. H. F. McColly. Dec., 1930.

OHIO AGRICULTURAL EXPERIMENT STATION, WOOSTER

BULLETINS

430. The normal multiple sprouting of seed potatoes. John Bushnell. Jan., 1929.
431. Forty-seventh annual report of the Ohio agricultural experiment station for the year ended June 30, 1928. C. G. Williams [and others]. Mar., 1929.
432. Ohio potato diseases. P. E. Tilford. Mar., 1929.
433. Food consumption of farm families. Hughina McKay and M. A. Brown. Apr., 1929.
434. Fruit varieties in Ohio: IV, Crab apples. C. W. Ellenwood. Apr., 1929.
435. What does it cost to grow a bushel of apples? F. H. Ballou. May, 1929.
436. The nutritive value of blood-meal protein for growth. A. R. Winter. May, 1929.
437. Keeping chickens in confinement. D. C. Kennard and R. M. Bethke. June, 1929.
438. Losses in shipping Ohio livestock. G. F. Henning. June, 1929.
439. The culture of greenhouse chrysanthemums. W. W. Wiggin. Aug., 1929.
440. The truck and its relationship to livestock marketing in Ohio. G. F. Henning. Aug., 1929.
441. Organic food reserves in relation to the eradication of Canada thistles. F. A. Welton, V. H. Morris, and A. J. Hartzler. Sept., 1929.
442. Ohio agricultural statistics for 1928. G. S. Ray, T. F. McDonough, and R. E. Straszheim. Sept., 1929.
443. Farmers' produce markets in Ohio. C. W. Hauck. Nov., 1929.
444. The strawberry in Ohio. J. S. Shoemaker. Nov., 1929.
445. The climate of Ohio. W. H. Alexander and C. A. Patton. Dec., 1929.
446. Forty-eighth annual report of the Ohio agricultural experiment station for the year ended June 30, 1929. C. G. Williams [and others]. Feb., 1930.
447. Paper mulch for the vegetable garden, its effect on plant growth and on soil moisture, nitrates, and temperature. Roy Magruder. Mar., 1930.
448. Water soluble arsenic in spray material. H. C. Young. Mar., 1930.
449. Carnation culture. W. W. Wiggin. Mar., 1930.
450. Estimated income from the Ohio agricultural industry. V. R. Wertz. Mar., 1930.
451. Control of root-knot nematode in greenhouses. A. G. Newhall. Apr., 1930.
452. Soybeans and soybean oilmeal for pigs. W. L. Robison. May, 1930.
453. Variations in crop production costs in Medina County, Ohio. F. L. Morison. June, 1930.
454. Raspberries and blackberries in Ohio: Culture. J. S. Shoemaker.— Diseases. C. W. Bennett.— Insects. J. S. Houser. June, 1930.
455. Dicalcium phosphate as a mineral supplement for dairy cows. C. C. Hayden, C. F. Monroe, and C. H. Crawford. Aug., 1930.
456. The cost of developing an apple orchard. C. W. Ellenwood. Aug., 1930.
457. Oriental fruit moth investigations in Ohio, I. L. A. Stearns and R. B. Neiswander. Sept., 1930.
458. Some factors affecting the movement of Ohio wheat. L. G. Foster. Sept., 1930.
459. Taxation as related to the property and income of Ohio farmers. H. R. Moore. Sept., 1930.
460. Ohio agricultural statistics for 1929. G. S. Ray, A. R. Tuttle, and R. E. Straszheim. Sept., 1930.
461. The control of celery blights. J. D. Wilson and A. G. Newhall. Oct., 1930.
462. Rate of planting potatoes with some reference to sprouting habit and size of plants. John Bushnell. Oct., 1930.
463. Molasses in ration for fattening calves. Paul Gerlaugh. Oct., 1930.
464. Apple aphids in Ohio. C. R. Cutright. Oct., 1930.
465. Basal metabolism of young women. Hughina McKay. Nov., 1930.
466. Relation of nitrogen fertilizer to the firmness and composition of strawberries. J. S. Shoemaker and E. W. Greve. Nov., 1930.
467. Movement of open country population in Ohio. C. E. Lively and P. G. Beck. Nov., 1930.
468. Family living expenditures on Ohio farms. C. E. Lively. Nov., 1930.
469. The development of market milk areas in northeastern Ohio. C. G. McBride. Nov., 1930.

OKLAHOMA AGRICULTURAL EXPERIMENT STATION, STILLWATER

BULLETINS

185. The relations of economic, social and educational advancement of farmers to their membership in organizations. L. D. Howell. June, 1929.
186. Economic conditions of farmers in Oklahoma as related to membership in the Oklahoma cotton growers association. W. W. Fetrow. [1929.]
187. Biometrical analysis of upland cotton grown at Stillwater, Oklahoma. Fred Griffee, L. L. Ligon, and L. H. Brannon. June, 1929.
188. A fertilizer study on the brown soil of the Red Prairies. H. F. Murphy. June, 1929.
189. Fertility studies on Kirkland soil. H. F. Murphy. June, 1929.
190. The utilization of moisture on heavy soils of the southern Great Plains. H. H. Finnell. June, 1929.
191. Sorghum crops on the high plains of Oklahoma. H. H. Finnell. June, 1929.
192. Initial soil moisture and crop yield. H. H. Finnell. June, 1929.
193. Heavy plains soil moisture problems. H. H. Finnell. June, 1929.
194. Relation of town and country interests in Garfield County, Oklahoma. J. F. Page. Jan., 1930.
195. The economic and social aspects of mobility of Oklahoma farmers. J. T. Sanders. Aug., 1929.
196. Corn, barley and grain sorghums for fattening lambs. A. E. Darlow. Mar., 1930.
197. The relation between the economic status of the Oklahoma farm family and the farm woman's standards of management with respect to clothing. Grace Fernandes. June, 1930.
198. Credit problems of Oklahoma cotton farmers, with special reference to Garvin, Jackson, and Pittsburg Counties. A. N. Moore and J. T. Sanders. Oct., 1930.

OREGON AGRICULTURAL EXPERIMENT STATION, CORVALLIS

BULLETINS

242. The occurrence and prevention of calyx injury in apples from the Hood River Valley. Henry Hartman, Leroy Childs, and R. H. Robinson. May, 1929.
243. The relation of woolly apple aphid to perennial canker infection, with other notes on the disease. Leroy Childs. May, 1929.
244. Oregon apple prices, by variety, grade, and size, 1922-1926. R. S. Besse and M. R. Cooper. May, 1929.
245. Cost and practices in strawberry production in the Willamette Valley. C. E. Schuster and A. S. Burrier. May, 1929.
246. Alfalfa in western Oregon. H. A. Schoth and G. R. Hyslop. May, 1929.
247. Investigations relating to the handling of sweet cherries, with special reference to chemical and physiological activities during ripening. Henry Hartman and D. E. Bullis. May, 1929.
248. Cost and efficiency in producing hay in the Willamette Valley. H. E. Selby. May, 1929.
249. The chemical composition and food value of Oregon dried prunes. J. S. Jones and D. E. Bullis. June, 1929.
250. Cost of horse labor on Oregon farms. H. E. Selby, B. W. Rodenwold, and H. D. Scudder. June, 1929.
251. Cost of producing silage and kale in the Willamette Valley. H. E. Selby. June, 1929.
252. Studies of factors influencing separation of dried prunes into quality grades. E. H. Wiegand and D. E. Bullis. July, 1929.
253. Congenital loco in chicks. F. L. Knowlton. July, 1929.
254. Further investigations on the harvesting, storing and ripening of pears from Rogue River Valley. Henry Hartman, F. C. Reimer, and R. K. Norris. Aug., 1929.
255. Electric hay hoists. F. E. Price, A. W. Oliver, and E. L. Potter. Sept., 1929.
256. Use of time by Oregon farm homemakers. Maud Wilson. Nov., 1929.
257. Trends of tax levies in Oregon with emphasis upon rural and city real properties. W. H. Dreesen. Nov., 1929.
258. The butter industry of Oregon, a study of factors relating to the quality of butter. E. S. Larrabee and Gustav Wilster. Dec., 1929.
259. Sprays, their preparation and use. R. H. Robinson. Feb., 1930.
260. Marketing Willamette Valley wools through the Pacific cooperative wool growers. E. B. Mittelman. Feb., 1930.

261. Willamette Valley wools in relation to local consumption. E. B. Mittelman. Feb., 1930.
262. Electric brooders. F. E. Price, A. G. Lunn, and F. E. Fox. Apr., 1930.
263. The market situation and outlook for the Oregon canned fresh prune. M. N. Nelson and W. H. Belden. May, 1930.
264. Irrigated pastures for dairy cattle. I. R. Jones and P. M. Brandt. May, 1930.
265. Lamb marketing investigations in western Oregon. H. A. Lindgren and E. L. Potter. June, 1930.
266. Studies in fascioliasis in Oregon sheep and goats. J. N. Shaw and B. T. Simms. June, 1930.
267. Cost and efficiency in pear production in the Rogue River Valley. R. S. Besse, W. S. Brown, and L. P. Wilcox. June, 1930.
268. Mechanical refrigeration of milk in a tank type refrigerator. F. E. Price, C. J. Hurd, and G. V. Copson. June, 1930.
269. Fattening pigs for market. A. W. Oliver and E. L. Potter. Nov., 1930.
270. Progress report of the irrigated eighty-acre demonstration farm unit of the Harney branch experiment station 1927-1930. Obil Shattuck and R. E. Hutchison. Oct., 1930.
271. Deferred breeding of beef cows. Robert Withycombe, E. L. Potter, and F. M. Edwards. Nov., 1930.
272. The comparative value of kale and corn silage for milk production. I. R. Jones and P. M. Brandt. Dec., 1930.
273. Fowl-pox control. W. T. Johnson. Dec., 1930.

PENNSYLVANIA AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE

BULLETINS

236. Black locust in Pennsylvania. A. G. McIntyre. Feb., 1929.
237. A farm machinery survey of selected districts in Pennsylvania. Summarized by H. B. Josephson, W. R. Humphries, and L. M. Church. Mar., 1929.
238. Farm power and labor. H. B. Josephson and R. U. Blasingame. Apr., 1929.
239. (Technical bulletin.) The rusts of Pennsylvania. F. D. Kern, H. W. Thurston, jr., C. R. Orton, and J. F. Adams. May, 1929.
240. Results of tobacco experiments in Pennsylvania, 1922 to 1927. Otto Olson and D. E. Haley. Apr., 1929.
241. The insulation of fruit and vegetable storages. R. D. Anthony and F. G. Hechler. June, 1929.
242. A study of the business practices of farmers' local cooperative purchasing associations in Pennsylvania. J. K. Stern. June, 1929.
243. 42nd annual report for the fiscal year ending June 30, 1929. R. L. Watts [and others]. July, 1929.
244. Containers for plant growing. J. E. Knott and C. D. Jeffries. Aug., 1929.
245. The consumption of dairy products by 1,370 families in Philadelphia. F. F. Lininger and Hutzler Metzger. Mar., 1930.
246. Managing confined fowls. H. C. Kandel, E. W. Callenbach, and P. H. Margolf. Mar., 1930.
247. (Technical.) The effect of aging the mix on the freezing time, overrun, and quality of ice cream. C. D. Dahle, J. I. Keith, and A. D. McCullough. Mar., 1930.
248. The effect of selection in the tomato. C. E. Myers and M. T. Lewis. Jan., 1930.
249. Sulphate of ammonia and nitrate of soda in a sod orchard. R. D. Anthony. Mar., 1930.
250. Feed consumption and costs in raising turkeys. E. M. Funk and P. H. Margolf. Mar., 1930.
251. A price plan for selling milk by collective bargaining organizations. R. W. Bartlett. May, 1930.
252. A field test of different sources of phosphorus. C. F. Noll, F. D. Gardner, and C. J. Irvin. May, 1930.
253. Varieties of apples for Pennsylvania. F. N. Fagan and R. H. Sudds. Apr., 1930.
254. Pasture crops for swine. M. A. McCarty and M. F. Grimes. May, 1930.
255. Producing early lambs. W. L. Henning, P. T. Ziegler, and P. C. MacKenzie. May, 1930. Revision of 209.
256. Membership problems in a milk marketing organization. J. K. Stern. May, 1930.
257. Land utilization and farm management in Wyoming County. P. I. Wrigley. May, 1930.
258. 43rd annual report for the fiscal year ending June 30, 1930. R. L. Watts [and others]. July, 1930.

259. (Technical.) A review of research on the control of wireworms. C. A. Thomas. July, 1930.
260. Growing and marketing grapes in Erie County, Pennsylvania. J. T. Vandenburg, jr., and G. P. Scoville. Aug., 1930.

UNNUMBERED PUBLICATION

Progress report on the use of small electric motors for: 1, Cutting ensilage; 2, sawing wood; 3, grinding feed. H. B. Josephson and R. U. Blasingame. May, 1929.

PORTO RICO AGRICULTURAL EXPERIMENT STATION, MAYAGUEZ

BULLETIN

33. Citrus culture in Porto Rico. H. C. Henricksen. Feb., 1930. Also Spanish edition.

RHODE ISLAND AGRICULTURAL EXPERIMENT STATION, KINGSTON

BULLETINS

217. The persistence of certain lawn grasses as affected by fertilization and competition. E. S. Garner and S. C. Damon. July, 1929.
218. Studies on the inheritance of egg-weight: II, The effect of selection on egg-weight. N. F. Waters and J. C. Weldin. July, 1929.
219. Practices on Rhode Island dairy farms. J. L. Tennant. July, 1929.
220. Preferences and practices in buying vegetables in Providence, Rhode Island. R. B. Corbett. Sept., 1929.
221. Time factors in the business of homemaking in rural Rhode Island. Margaret Whittemore and Berniece Neil. Sept., 1929.
222. The production of gas by *Salmonella pullorum*, II. J. C. Weldin and H. J. Weaver. Sept., 1929.
223. Costs of cooling milk on farms. R. B. Corbett. May, 1930.
224. Fertilizer and crop rotation experiments. T. E. Odland, S. C. Damon, and J. L. Tennant. Aug., 1930.
225. The amount of manure necessary for vegetable growing, II. F. K. Crandall and T. E. Odland. Nov., 1930.
226. Some phases of apple growing in Rhode Island. A. E. Stene. Dec., 1930.

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION, CLEMSON COLLEGE

BULLETINS

254. Corn silage versus sweet sorghum silage for milk production. J. P. LaMaster and K. S. Morrow. Jan., 1929.
255. Ground hay for milk production. K. S. Morrow and J. P. LaMaster. Jan., 1929.
256. House fly fumigation experiments with calcium cyanide. C. O. Eddy. Apr., 1929.
257. The maize billbug in South Carolina. O. L. Cartwright. May, 1929.
258. The Mexican bean beetle, 1927-1928. C. O. Eddy and W. H. Clarke. June, 1929.
259. Analyses of commercial fertilizers. R. N. Brackett and D. H. Henry. Aug., 1929.
260. Children of pre-school age in selected areas of South Carolina. M. E. Frayser. Sept., 1929.
261. Fruiting habit of the cotton plant. T. S. Buie. Oct., 1929.
262. Fertilizer rotation experiments at the Pee Dee station. T. S. Buie, R. E. Currin, E. D. Kyzer, and J. D. Warner. Nov., 1929.
263. The use of leisure in selected rural areas of South Carolina. M. E. Frayser. Mar. 1930.
264. Piedmont farm business studies. W. C. Jensen and B. A. Russell. Mar., 1930.
265. The bean leaf beetle. C. O. Eddy and W. C. Nettles. May, 1930.
266. The rice weevil and associated insects in relation to shuck lengths and corn varieties. O. L. Cartwright. June, 1930.
267. Analyses of commercial fertilizers. R. N. Brackett and D. H. Henry. Aug., 1930.
268. The diet of school children in relation to their health. M. E. Frayser and A. M. Moser. Sept., 1930.

SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION, BROOKINGS

BULLETINS

236. Self feeders in dairy calf feeding. T. M. Olson. Mar., 1929.
237. Experiments in plant heredity. N. E. Hansen. Apr., 1929.
238. Types of farming in South Dakota. R. H. Rogers and F. F. Elliott. June, 1929.

239. Costs and uses for electricity on South Dakota farms. R. L. Patty [and others]. June, 1929.
240. Hardy roses for South Dakota. N. E. Hansen. June, 1929.
241. Cost of electricity for the home electric refrigerator. R. L. Patty. June, 1929.
242. Results of poultry feeding experiments. G. L. Stevenson. June, 1929.
243. Marketing of poultry products. G. L. Stevenson. June, 1929.
244. Progress report on the use of the combine in South Dakota. Gabriel Lundy, K. H. Klages, and J. F. Goss. Sept., 1929.
245. The possibility of utilizing selfed strains in practical corn improvement. A. N. Hume. Feb., 1930.
246. The shade, windbreak and timber trees of South Dakota. N. E. Hansen. Mar., 1930.
247. The use of time by South Dakota farm homemakers. G. E. Wasson. Mar., 1930.
248. A study of women's coats. A. O. Halgrim. Mar., 1930.
249. Economic adjustments on farms in southeastern South Dakota. R. H. Rogers. Mar., 1930.
250. The high school education of farm boys and girls in South Dakota. W. F. Kumlien. Mar., 1930.
251. Combining grain in weed-free fields, progress report on combine project for 1929. D. E. Wiant and R. L. Patty. Apr., 1930.
252. Value of grinding grains and roughages for livestock. J. W. Wilson, R. L. Patty, Turner Wright, and T. M. Olson. May, 1930.
253. A decade of crop yields from Vivian farm. A. N. Hume. July, 1930.
254. Evergreens in South Dakota. N. E. Hansen. Oct., 1930.
255. Cattle ranch organization and management in western South Dakota. M. B. Johnson. Nov., 1930.
256. Barley production in South Dakota. K. H. Klages. Dec., 1930.

TENNESSEE AGRICULTURAL EXPERIMENT STATION, KNOXVILLE

BULLETINS

140. Cryolite and barium fluosilicate, their use as insecticides. Simon Marcovitch and W. W. Stanley. Nov., 1929.
141. The comparative values of different phosphates. C. A. Mooers. Nov., 1929.
142. The effects of various legumes on the yield of corn. C. A. Mooers. Feb., 1930.
143. Sodium acid sulphate as a disinfectant against *Salmonella pullorum* in poultry-yard soils, a preliminary study. P. W. Allen and Moses Jacob. Sept., 1930.
144. A comparison of normal corn silage with grainless corn silage for finishing beef cattle. Moses Jacob and H. R. Duncan. Oct., 1930.

TEXAS AGRICULTURAL EXPERIMENT STATION, COLLEGE STATION

BULLETINS

393. Plants susceptible or resistant to cotton root rot and their relation to control. J. J. Taubenhaus, B. F. Dana, and S. E. Wolff. Feb., 1929.
394. Boll weevil control by airplane dusting. F. L. Thomas, W. L. Owen, jr., J. C. Gaines, jr., and Franklin Sherman, III. Apr., 1929.
395. Systems of farming for the Black Waxy Prairie Belt of Texas. L. P. Gabbard, J. B. Hutson, and T. L. Gaston, jr. May, 1929.
396. Sudan grass for hay, seed, and pasture. R. E. Karper, J. R. Quinby, and D. L. Jones. Apr., 1929.
397. Corn varieties in Texas, their regional and seasonal adaptation. P. C. Mangelsdorf. June, 1929.
398. Fertilizers for rice in Texas. E. B. Reynolds and R. H. Wyche. June, 1929.
399. Varieties of cotton for the Blackland region of central Texas. D. T. Killough, Henry Dunlavy, and H. B. Rea. July, 1929.
400. The basicity of Texas soils. G. S. Fraps and E. C. Carlyle. Dec., 1929.
401. The cotton-square borer. H. J. Reinhard. Sept., 1929.
402. Supplementary energy-production coefficients of American feeding stuffs fed ruminants. G. S. Fraps. Oct., 1929.
403. Commercial fertilizers in 1928-29 and their uses. G. S. Fraps and S. E. Asbury. Oct., 1929.
404. Commercial feeding stuffs, from September 1, 1928, to August 31, 1929. F. D. Fuller. Dec., 1929.
405. Karakul sheep. J. L. Lush, J. M. Jones, and R. E. Dickson. Feb., 1930.
406. Cotton variety experiments at Substation No. 2, Troup. W. S. Hotchkiss and P. R. Johnson. Feb., 1930.

407. The inheritance of cryptorchidism in goats. J. L. Lush, J. M. Jones, and W. H. Dameron. Feb., 1930.
408. The effect of sulphur on yield of certain crops. E. B. Reynolds. Feb., 1930.
409. Normal growth of range cattle. J. L. Lush, J. M. Jones, W. H. Dameron, and O. L. Carpenter. Mar., 1930.
410. Cottonseed meal as a feed for hogs. Fred Hale. Mar., 1930.
411. Factors influencing runoff and soil erosion. A. B. Conner, R. E. Dickson, and Daniels Scoates. Mar., 1930.
412. Occurrence of nitrites in soils. G. S. Fraps and A. J. Sterges. July, 1930.
413. Planning the ranch for greater profit, a study of physical and economic factors affecting organization and management of ranches in the Edwards Plateau grazing area. L. P. Gabbard, C. A. Bonnen, and J. N. Tate. July, 1930.
414. Possibilities of sulphur as a soil amendment. G. S. Fraps. Aug., 1930.
415. Commercial fertilizers in 1929-1930 and their uses. G. S. Fraps and S. E. Asbury. Sept., 1930.
416. Methods of ginning in relation to the grade and staple of cotton. D. T. Killough and G. T. McNess. Nov., 1930.
417. Varieties of cotton for north Texas. P. B. Dunkle. Nov., 1930.
418. Digestibility by sheep of the constituents of the nitrogen-free extract of feeds. G. S. Fraps. Nov., 1930.
419. Citrus production in the lower Rio Grande Valley of Texas. H. P. Traub and W. H. Friend. Dec., 1930.
420. Commercial feeding stuffs, from September 1, 1929, to August 31, 1930. F. D. Fuller and S. D. Pearce. Dec., 1930.

UTAH AGRICULTURAL EXPERIMENT STATION, LOGAN

BULLETINS

209. Biennial report of the director, July 1, 1926-June 30, 1928. P. V. Cardon [and others]. Feb., 1929.
210. The mineral content of grains. J. E. Greaves and C. T. Hirst. May, 1929.
211. Silage corn varieties for Utah. George Stewart and A. L. Wilson. June, 1929.
212. (Technical.) Studies on the morphology of the beet leafhopper, *Eutettix tenellus* (Baker). G. F. Knowlton. July, 1929.
213. Food habits of Utah farm families. A. P. Brown. July, 1929.
214. An economic survey of the "Dixie" section, Washington County, Utah, with special reference to production and marketing of truck crops and fruit. W. P. Thomas. Jan., 1930.
215. Cost reduction in dry-farming in Utah. P. V. Cardon. Mar., 1930.
216. Notes on miscellaneous insects of Utah. H. J. Pack. Apr., 1930. Compiled by G. F. Knowlton.
217. Prices of farm products in Utah. W. P. Thomas. June, 1930.
218. The alfalfa-seed chalcids-fly in Utah, 1926-29, inclusive. C. J. Sorenson. June, 1930.
219. Twenty-eight years of irrigation experiments near Logan, Utah, 1902-29, inclusive. D. W. Pittman and George Stewart. June, 1930.
220. Biennial report of Utah agricultural experiment station, July 1, 1928, to June 30, 1930. P. V. Cardon. July, 1930.
221. Snakes of Utah. H. J. Pack. Aug., 1930. Compiled by G. F. Knowlton.
222. A quarter century of dry-farm experiments at Nephi, Utah. A. F. Bracken and George Stewart. Nov., 1930.
223. Feeding value of alfalfa hay treated with calcium arsenate. H. J. Frederick. Dec., 1930.

VERMONT AGRICULTURAL EXPERIMENT STATION, BURLINGTON

BULLETINS

292. Cost and profit in the sugar orchard. J. A. Hitchcock. Feb., 1929. Summary of Buls. 285-286.
293. Commercial feeding stuffs. L. S. Walker and E. F. Boyce. Apr., 1929.
294. Comparative study of data on farm household expenditures obtained by household accounts and by a survey. Marianne Muse and C. P. Brooks. June, 1929.
295. Yield and composition of pasture grass. H. B. Ellenberger, J. A. Newlander, and C. H. Jones. June, 1929.
296. The role of magnesium in the aging of plants. B. F. Lutman and N. L. Walbridge. June, 1929.

297. The value of scabby potatoes. B. F. Lutman. June, 1929.
298. Studies in tolerance of New England forest trees: IX, Rainfall and width of annual rings in Vermont forests. G. P. Burns. June, 1929.
299. The keeping quality of stored dairy products: I, Metallic flavor in frozen cream. H. B. Ellenberger and H. L. White.— II, Comparative keeping quality of cream, butter and butter oil. J. A. Newlander and H. B. Ellenberger. July, 1929.
300. The production of high quality milk: I, Cooling, the electric brine cooler with cold-air storage versus ice and water. H. B. Ellenberger. July, 1929.
301. Commercial fertilizers. L. S. Walker and E. F. Boyce. Aug., 1929.
302. Forty-second annual report, 1928-1929. J. L. Hills. Aug., 1929.
303. Milk receiving station operation in Vermont. O. M. Camburn. Nov., 1929.
304. Studies in Vermont dairy farming: V, Cabot-Marshfield area. E. W. Bell. Sept., 1929.
305. Commercial feeding stuffs. L. S. Walker and E. F. Boyce. Oct., 1929.
306. Agricultural seed. A. S. Lutman. Oct., 1929.
307. Studies in Vermont dairy farming: VI, The position of northern Vermont among American dairy farming regions. J. L. Hills. Nov., 1929.
308. Apple thinning experiments: Cause relations of small apples; size increases of large and small apples; quarter century study of a variety orchard. M. B. Cummings, E. W. Jenkins, and R. G. Dunning. June, 1930.
309. Commercial feeding stuffs. L. S. Walker and E. F. Boyce. July, 1930.
310. Studies in tolerance of New England forest trees: X, The change in the environmental factors caused by thinnings in pine plantations. W. R. Adams, jr. May, 1930.
311. A study of natural reproduction in Vermont forests: I, The effect of thinning on diameter growth. G. P. Burns and W. E. White. July, 1930.
312. Preparing samples of milk for the methylene blue reduction test. H. B. Ellenberger and R. I. Moody. June, 1930.
313. The production of high quality milk: II, The influence of delayed cooling upon the quality of milk. J. M. Frayer. June, 1930.
314. Variability, accuracy and adaptability of some common methods of determining the keeping quality of milk: I, Methods of comparison. A. H. Robertson and J. M. Frayer. June, 1930.
315. Variability, accuracy and adaptability of some common methods of determining the keeping quality of milk: II, Observations in sextuplicate. A. H. Robertson, R. I. Moody, and J. M. Frayer. June, 1930.
316. Variability, accuracy and adaptability of some common methods of determining the keeping quality of milk: III, Observations at different temperatures and at successive intervals on the same sample. A. H. Robertson and J. M. Frayer. June, 1930.
317. Variability, accuracy and adaptability of some common methods of determining the keeping quality of milk: IV, Correlation studies. A. H. Robertson and J. M. Frayer. June, 1930.
318. Variability, accuracy and adaptability of some common methods of determining the keeping quality of milk: V, The broader aspects of variability. A. H. Robertson and J. M. Frayer. June, 1930.
319. Forty-third annual report, 1929-1930. J. L. Hills. July, 1930.
320. Commercial fertilizers. L. S. Walker and E. F. Boyce. July, 1930.
321. Commercial feeding stuffs. L. S. Walker and E. F. Boyce. Nov., 1930.
322. Agricultural seed. A. S. Lutman.— Fifteen years of agricultural seed inspection. J. L. Hills. Nov., 1930.
323. A half century of fertilizer control in Vermont. J. L. Hills. Dec., 1930.
324. A third of a century of feeding stuff inspection. J. L. Hills. Dec., 1930.
325. Studies in North American violets: II, The cytology of some sterile F_1 violet hybrids. Ronald Bamford and Alexander Gershoy. Dec., 1930.

VIRGINIA AGRICULTURAL EXPERIMENT STATION, BLACKSBURG

BULLETINS

265. Bacillary white diarrhea, pullorum infection of the domestic fowl. R. A. Runnells. Mar., 1929.
266. The adjustment of agricultural production to meet home market demands in the Clifton Forge-Covington trade area. J. J. Vernon and T. D. Johnson.— The place of timber growing in the development of the Clifton Forge-Covington trade area. Wilbur O'Byrne. Apr., 1929.

267. The rôle of the church in rural community life in Virginia. C. H. Hamilton and W. E. Garnett. June, 1929.
268. Taxes on farm and urban real estate in Virginia. R. A. Ballinger and Whitney Coombs. Sept., 1929.
269. Soil management experiments with the application of fertilizers in apple orchards. F. W. Hofmann. Mar., 1930.
270. Life history of the oriental fruit moth in Virginia. LeRoy Cagle. May, 1930.
271. Stock share renting in Virginia. R. A. Ballinger. May, 1930.
272. Systems of dairy farm management for the Richmond milk producing area. J. L. Maxton, R. S. Kifer, and J. J. Vernon. June, 1930.
273. The negro church in rural Virginia. C. H. Hamilton and J. M. Ellison. June, 1930.
274. Young people's organizations in relation to rural life in Virginia, with special reference to 4-H clubs: Section I, The 4-H club system; II, the place of 4-H club work in the State's educational system; III, summary and conclusions. W. E. Garnett.— IV, Effects of club work on school work. F. H. Stubbs. June, 1930.
275. Marketing fluid milk in four Virginia cities. J. L. Maxton and C. C. Taylor. Dec., 1930.
276. Marketing woodland products in Virginia. J. E. Lodewick. Dec., 1930.

TECHNICAL BULLETINS

35. Tests of tobacco fertilizers comparing nitrogen, phosphorus and potassium from different fertilizer sources. T. B. Hutcheson and T. L. Copley. Jan., 1929.
36. Calcium sulphide for the control of apple and peach diseases. R. H. Hurt and F. J. Schneiderhan. Feb., 1929.
37. Historical study of prices received by producers of farm products in Virginia, 1801–1927. A. G. Peterson. Mar., 1929.
38. Methods of balancing rations for dairy cows in digestibility trials with corn meal. C. W. Holdaway, W. B. Ellett, and J. F. Eheart. May, 1929.
39. Studies on the ox warble flies, *Hypoderma lineatum* and *Hypoderma bovis*, with special reference to economic importance and control. L. I. Case. Sept., 1929.
40. A study of hibernation of the corn earworm in Virginia. W. J. Phillips and G. W. Barber. Nov., 1929.
41. Feeding Hevea rubber seed meal for milk production. W. B. Ellett, C. W. Holdaway, J. F. Eheart, and L. D. Lasting. Apr., 1930.

WASHINGTON AGRICULTURAL EXPERIMENT STATION, PULLMAN

BULLETINS

230. Cranberry growing in Washington. D. J. Crowley. Feb., 1929.
231. Electric incubation and brooding. H. L. Garver and J. S. Carver. Mar., 1929.
232. Spraying experiments for codling moth control. Anthony Spuler. Mar., 1929.
233. A study of farm migration in selected communities in the State of Washington. A. A. Smick and F. R. Yoder. June, 1929.
234. The present use of work time of farm homemakers. I. F. Arnquist and E. H. Roberts. July, 1929.
235. Eradicating the bindweed with sodium chlorate. E. G. Schafer, O. C. Lee, and J. R. Neller. June, 1929.
236. Collar rot of apple trees. J. R. Magness. Oct., 1929.
237. Thirty-ninth annual report for the fiscal year ended June 30, 1929. E. C. Johnson [and others]. Dec., 1929.
238. Economic aspects of the Washington fruit industry: Apricots, cherries, peaches, and pears. N. W. Johnson. Apr., 1930.
239. Economic aspects of apple production in Washington. N. W. Johnson. Apr., 1930.
240. The production of cereals under irrigation in Washington. H. P. Singleton. June, 1930.
241. The control of bunt or stinking smut of wheat. F. D. Heald and E. F. Gaines. July, 1930.
242. Washington apple prices and costs of shipping point marketing services. C. C. Hampson and E. F. Dummeier. July, 1930.
243. Effect of calcium and phosphorus content of various soil series in western Washington upon the calcium and phosphorus composition of oats, red clover and white clover. H. F. Holtz. June, 1930.

244. Farming systems for eastern Washington and northern Idaho. George Severance, Byron Hunter, and Paul Eke. July, 1930. Also published as Idaho Bul. 173.
 245. Fortieth annual report for the fiscal year ended June 30, 1930. E. C. Johnson [and others]. Dec., 1930.

POPULAR BULLETINS

145. Units of measurement and the application of irrigation water. C. C. Wright. June, 1929.
 146. Washington chick rations. J. S. Carver, W. D. Buchanan, and M. W. Miller. Nov., 1929. Also published as West. Wash. Bul. 15-W.
 147. The farm shop. L. J. Smith and H. L. Garver. June, 1930.

WESTERN WASHINGTON AGRICULTURAL EXPERIMENT STATION, PUYALLUP

BULLETINS

- 11-W. Grain crops in western Washington. M. E. McCollam. Jan., 1929.
 12-W. Control of fowl pox. C. E. Sawyer. Apr., 1929.
 13-W. Recommended dates for application of standard hot water treatment to hardy narcissus. H. D. Locklin and G. A. Newton. July, 1929.
 14-W. Annual report of the Western Washington experiment station for the fiscal year ending March 31, 1929. J. W. Kalkus [and others]. Oct., 1929.
 15-W. Washington chick rations. M. W. Miller, W. D. Buchanan, and J. S. Carver. Jan., 1930. Also published as Wash. Pop. Bul. 146.
 16-W. Berry cultivation in western Washington. H. D. Locklin. Apr., 1930.
 17-W. Pullorum disease (bacillary white diarrhea). C. E. Sawyer and C. M. Hamilton. July, 1930.
 18-W. Annual report of the Western Washington experiment station for the fiscal year ending March 31, 1930. J. W. Kalkus [and others]. Oct., 1930.

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BULLETINS

221. Cooperative buying in West Virginia, including W. Va. cooperative marketing act of 1923. P. A. Eke. Mar., 1929.
 222. Varieties of fruits for West Virginia: I, The tree fruits. H. E. Knowlton. Mar., 1929.
 223. A study of the time factor in egg production. Horace Atwood. Oct., 1929.
 224. The cost of raising dairy cows in West Virginia. P. A. Eke. Nov., 1929.
 225. The relative value of high-grade and low-grade calves marketed as two-year-old steers. E. A. Livesay. Nov., 1929.
 226. Adjusting agricultural production and distribution in the Beckley area to meet home market demands. W. W. Armentrout. Jan., 1930.
 227. Soybeans for silage and for hay. T. E. Odland. Feb., 1930.
 228. Adjusting agricultural production and distribution in the Wheeling area to meet home market demands. W. W. Armentrout. Feb., 1930.
 229. Cream line studies of market milk. G. M. Trout. Mar., 1930.
 230. Growth studies with swine. J. H. Longwell, H. O. Henderson, and W. M. Insko, jr. Mar., 1930.
 231. The effect of feeding different amounts of calcium and phosphorus upon the growth and development of dairy animals. H. O. Henderson and C. E. Weakley, jr. Mar., 1930.
 232. Wintering dairy heifers by means of the self-feeder. H. O. Henderson and E. L. Anthony. Apr., 1930.
 233. The relationship between the number and weight of eggs and body weight of Leghorn fowls during the first three years of production. Horace Atwood and T. B. Clark. Apr., 1930.
 234. Standardization of cherry and blackberry preserves and blackberry jelly. Hazel Cameron and R. B. Burns. June, 1930.
 235. Pasture experiments. T. E. Odland, C. V. Wilson, H. O. Henderson, and E. P. Deatrick. June, 1930.
 236. Physiological investigations on the resistance of peach buds to freezing temperatures. H. L. Crane. Aug., 1930.
 237. Varietal tests with wheat, oats, barley, rye, and buckwheat. M. M. Hoover and R. J. Garber. Oct., 1930.
 238. The West Virginia community packing house at Inwood as a state service to apple growing. F. J. Schneiderhan. Nov., 1930.

WISCONSIN AGRICULTURAL EXPERIMENT STATION, MADISON

BULLETINS

404. Raising the dairy calf. I. W. Rupel. Jan., 1929.
405. What's new in farm science: Annual report of the director, 1927-1928. H. L. Russell [and others]. Feb., 1929.
406. Use and taxation of land in Lincoln County, Wisconsin. B. H. Hibbard, W. A. Hartman, and W. N. Sparhawk. Jan., 1929.
407. The farm timberlot. F. G. Wilson. Mar., 1929.
408. Field peas in Wisconsin. E. J. Delwiche. Mar., 1929.
409. Anemia in suckling pigs. E. B. Hart, C. A. Elvehjem, Harry Steenbock, Gustav Bohstedt, and J. M. Fargo. Sept., 1929.
410. New science for an old art: Annual report of the director, 1928-1929. H. L. Russell [and others]. Feb., 1930.
411. Use exhaust steam in dairy plants. M. J. Buck and H. C. Jackson. Jan., 1930.
412. Rotation and the tobacco crop. James Johnson and W. B. Ogden. Jan., 1930.
413. Fertilizers for tobacco. James Johnson and W. B. Ogden. Feb., 1930.
414. Permanent pastures can be improved. C. B. Mortimer and Griffith Richards. Feb., 1930.
415. Sour cherry fruiting. R. H. Roberts. May, 1930.
416. Success with sandy soils. A. R. Albert and A. R. Whitson. Apr., 1930.
417. Cut the cost of feeding cows. E. B. Hart and G. C. Humphrey. Sept., 1930.

RESEARCH BULLETINS

87. The classification of certain virus diseases of the potato. James Johnson. Jan., 1929.
88. How fast do northern hardwoods grow? Raphael Zon and H. F. Scholz. Jan., 1929.
89. Drainage of swamps and forest growth. Raphael Zon and J. L. Averell. Mar., 1929.
90. Yield of jack pine in the Lake States. A. E. Wackerman, Raphael Zon, and F. G. Wilson. Mar., 1929.
91. Forest fire hazard, as affected by weather conditions, forest type and density of cover. J. A. Mitchell and Raphael Zon. Apr., 1929.
92. Mechanics of digestion of pollen by the adult honey bee and the relation of undigested parts to dysentery of bees. Warren Whitcomb, jr., and H. F. Wilson. May, 1929.
93. The known predacious and parasitic enemies of the pea aphid in North America. C. L. Fluke. June, 1929.
94. Some stock and scion observations on apple trees. R. H. Roberts. June, 1929.
95. The overwintering of the tobacco mosaic virus. James Johnson and W. B. Ogden. June, 1929.
96. Rural organizations and the farm family. E. L. Kirkpatrick, J. H. Kolb, Creagh Inge, and A. F. Wileden. Nov., 1929.
97. Inheritance of Fusarium wilt resistance in canning peas. B. L. Wade. Dec., 1929.
98. Second-growth white pine in Wisconsin, its growth, yield, and commercial possibilities. S. R. Gevorkiantz and Raphael Zon. June, 1930.
99. Soil erosion, a local and national problem. C. G. Bates and O. R. Zeasman. Aug., 1930.
100. American cheese factories in Wisconsin. H. H. Bakken. Aug., 1930.
101. Origin and nature of rogues in canning peas. E. J. Renard. Nov., 1930.
102. Chopping hay for livestock and steaming or pre-digesting feeds. Gustav Bohstedt, B. H. Roche, I. W. Rupel, J. G. Fuller, and F. W. Duffee. Dec., 1930.
103. The foreign type cheese industry in Wisconsin. W. B. Silcox and H. H. Bakken. Dec., 1930.
104. The germination of tobacco seed. James Johnson, H. F. Murwin, and W. B. Ogden. Dec., 1930.
105. The relation of nitrate nitrogen and nitrification to the growth of tobacco following timothy. R. P. Thomas. Dec., 1930.

WYOMING AGRICULTURAL EXPERIMENT STATION, LARAMIE

BULLETINS

161. Methods of winter wheat tillage. A. L. Nelson. Jan., 1929.
162. Making bread from Wyoming flour. E. J. McKittrick and E. G. Grundmeier. Feb., 1929.
163. Results with tree planting at the Sheridan field station. R. S. Towle. Mar., 1929.

164. Barley production and varieties for Wyoming. Glen Hartman and A. F. Vass. Apr., 1929.
165. Dietary studies of farm families in Albany and Lincoln Counties, Wyoming. E. J. McKittrick. May, 1929.
166. Sterilization of brood combs infected with American foulbrood. C. H. Gilbert. June, 1929.
167. Field studies of the physical ecology of the alfalfa weevil. H. L. Sweetman. Sept., 1929.
168. Soil problems of the Wheatland project. T. J. Dunnewald.— Available phosphorus determination of soils (blue colorimetric method). Emil Truog. Sept., 1929.
169. Artificial incubation at high altitudes. F. J. Kohn. Jan., 1930.
170. Oat production and varieties for Wyoming. A. F. Vass and Glen Hartman. Feb., 1930.
171. Varietal tests with wheat at the Sheridan field station. R. S. Towle. Mar., 1930.
172. Studies on roup vaccination in chickens. Cecil Elder, F. J. Kohn, and A. M. Lee. June, 1930.
173. Methods of spring wheat tillage. A. L. Nelson. July, 1930.
174. Wool studies with Rambouillet sheep, No. II. F. S. Hultz and L. J. Paschal. Aug., 1930.
175. The metabolism of the honeybee colony during winter. C. L. Corkins. Nov., 1930.

INDEX OF AUTHORS

- Abbott, O. D., Fla. Bul. 216.
 Abell, M. F., N. H. Bul. 239.
 Ackerman, W. T., N. H. Bul. 244.
 Adams, J. F., Pa. Bul. 239.
 Adams, W. R., Jr., Vt. Bul. 310.
 Addoms, R. M., N. J. Bul. 494, 507.
 Ahmann, C. F., Fla. Bul. 216.
 Albert, A. R., Wis. Bul. 416.
 Albrecht, W. A., Mo. Bul. 282; Res. Bul. 132.
 Alexander, W. H., Ohio Bul. 445.
 Allen, F. W., Calif. Bul. 470, 501.
 Allen, H. R., Ky. Bul. 298, 313.
 Allen, J. R., Miss. Bul. 269.
 Allen, P. W., Tenn. Bul. 143.
 Allen, William, N. Y. Cornell Bul. 476.
 Amburgey, L. V., Ky. Bul. 295, 310.
 Ames, C. T., Miss. Bul. 272.
 Anderson, Arthur, Nebr. Res. Bul. 51.
 Anderson, E. E., N. Mex. Bul. 177.
 Anderson, E. O., Conn. Storrs Bul. 158, 170.
 Anderson, H. G., N. Dak. Bul. 238.
 Anderson, H. W., Ill. Bul. 340.
 Anderson, L. C., N. Y. State Bul. 574.
 Anderson, P. J., Conn. State Bul. 299, 306, 311.
 Anderson, R. J., N. Y. State Tech. Bul. 152.
 Anderson, W. A., N. C. Bul. 269, 275; Tech. Bul. 37.
 Anderson, W. S., Miss. Bul. 274.
 Anthony, E. L., W. Va. Bul. 232.
 Anthony, R. D., Pa. Bul. 241, 249.
 Arant, F. S., Ala. Bul. 230.
 Archibald, J. G., Mass. Bul. 253, 255.
 Armentrout, W. W., W. Va. Bul. 226, 228.
 Arnquist, I. F., Wash. Bul. 234.
 Arny, A. C., Minn. Bul. 252, 256, 263, 264.
 Asbury, S. E., Tex. Bul. 403, 415.
 Ashby, R. C., Ill. Bul. 331, 342.
 Ashton, John, Mo. Res. Bul. 141.
 Atkeson, F. W., Idaho Bul. 163.
 Atwood, Horace, W. Va. Bul. 223, 233.
 Auchter, E. C., Md. Bul. 322.
 Averell, J. L., Wis. Res. Bul. 89.
 Bailey, C. H., Minn. Bul. 256.
 Bailey, E. M., Conn. State Bul. 300, 303, 307, 308, 311, 317, 319, 321.
 Bailey, J. E., Ga. Bul. 150, 164.
 Bailey, R. Y., Ala. Bul. 232.
 Baker, G. L., Del. Bul. 160.
 Bakke, A. L., Iowa Res. Bul. 130.
 Bakken, H. H., Wis. Res. Bul. 100, 103.
 Bakkum, G. A., N. Y. Cornell Bul. 501.
 Ballinger, R. A., Va. Bul. 268, 271.
 Ballou, F. H., Ohio Bul. 435.
 Bamford, Ronald, Vt. Bul. 325.
 Barber, G. W., Va. Tech. Bul. 40.
 Barger, J. W., Mont. Bul. 219, 221, 224.
 Barnette, R. M., Fla. Bul. 215, 221.
 Bartholomew, E. T., Calif. Bul. 484.
 Bartlett, R. W., Pa. Bul. 251.
 Bassett, L. B., Minn. Bul. 266.
 Bates, C. G., Wis. Res. Bul. 99.
 Bauer, F. C., Ill. Bul. 327, 347, 362; Soil Rpt. 42, 43, 44, 45, 46 47.
 Baumgartner, W. H., N. J. Bul. 502.
 Bayer, L. D., Mo. Res. Bul. 129.
 Beach, J. R., Calif. Bul. 486; Hilgardia, V. 4, No. 8.
 Beadle, G. W., N. Y. Cornell Mem. 129.
 Beck, P. G., Ohio Bul. 467.
 Beckett, S. H., Calif. Bul. 489.
 Beckwith, C. S., N. J. Bul. 491, 501.
 Bedenbaugh, P. G., Miss. Bul. 283.
 Beers, H. W., N. Y. Cornell Bul. 512.
 Belden, W. H., Oreg. Bul. 263.
 Bell, E. J., Jr., Mont. Bul. 226, 232.
 Bell, E. W., Vt. Bul. 304.
 Belton, H. L., Calif. Bul. 476.
 Benedict, F. G., N. H. Bul. 240, 242; Tech. Bul. 43.
 Bennett, C. W., Ohio Bul. 454.
 Bennett, R. E., Iowa Bul. 269; Soil Rpt. 56, 57, 61, 62, 63, 64, 65.
 Benton, A. H., N. Dak. Bul. 225, 238.
 Benton, T. H., Iowa Res. Bul. 132; Soil Rpt. 55, 64, 65.
 Beresford, Hobart, Idaho Bul. 175.
 Berg, H. A., Ill. Bul. 329.
 Bergh, O. I., Minn. Bul. 267.
 Bernard, P. M., Mo. Bul. 287.
 Berry, L. N., N. Mex. Bul. 177, 183.
 Berry, M. H., Md. Bul. 319.
 Besse, R. S., Oreg. Bul. 244, 267.
 Bethke, R. M., Ohio Bul. 437.
 Binkley, A. M., Colo. Bul. 357.
 Bishop, L. M., Minn. Tech. Bul. 73.
 Bizzell, J. A., N. Y. Cornell Bul. 513; Mem. 134.
 Bjorka, Knute, Iowa Res. Bul. 122.
 Black, A. G., Minn. Tech. Bul. 72.
 Black, R. H., Minn. Bul. 256; N. Dak. Bul. 225.
 Blair, A. W., N. J. Bul. 498.
 Blake, M. A., N. J. Bul. 494, 507, 511.
 Blakeslee, A. F., Conn. Storrs Bul. 168.
 Blaney, H. F., Calif. Bul. 489.
 Blasingame, R. U., Pa. Bul. 238; [Unnumbered Pub.] 1929.
 Blauvelt, W. E., N. Y. Cornell Bul. 498.

- Bledsoe, R. P., Ga. Bul. 151, 152.
 Blodgett, E. C., Idaho Bul. 167, 171.
 Blood, P. T., N. H. Tech. Bul. 41.
 Bloodgood, D. W., N. Mex. Bul. 184.
 Boatman, Bryan, Iowa Soil Rpt. 56.
 Boatman, J. L., Iowa Bul. 266.
 Bohstedt, Gustav, Wis. Bul. 409; Res. Bul. 102.
 Bonde, Reiner, Me. Bul. 352.
 Bonnen, C. A., Tex. Bul. 413.
 Booth, E. G., Minn. Tech. Bul. 62.
 Boswell, V. R., Md. Bul. 306, 309, 313, 314.
 Botkin, C. W., N. Mex. Bul. 175.
 Boughton, I. B., Ill. Bul. 343.
 Bouyoucos, G. J., Mich. Spec. Bul. 192.
 Bowen, P. R., Conn. State Bul. 316.
 Boyce, E. F., Vt. Bul. 293, 301, 305, 309, 302, 321.
 Boyd, W. L., Minn. Tech. Bul. 73.
 Bracken, A. F., Utah Bul. 222.
 Brackett, E. E., Nebr. Bul. 235, 236, 249.
 Brackett, R. N., S. C. Bul. 259, 267.
 Bradford, F. C., Mich. Tech. Bul. 99.
 Bradley, C. J., Ky. Bul. 311.
 Branch, F. H., Mass. Bul. 251.
 Brandly, C. A., Kans. Bul. 247.
 Brandon, J. F., Colo. Bul. 370, 371.
 Brandt, P. M., Oreg. Bul. 264, 272.
 Brannen, C. O., Ark. Bul. 233, 236.
 Brannon, L. H., Okla. Bul. 187.
 Bratley, H. E., Fla. Bul. 209.
 Braun, E. W., Calif. Bul. 487, 488, 502.
 Bray, R. H., Ill. Bul. 337.
 Breazeale, J. F., Ariz. Bul. 131; Tech. Bul. 25, 26, 29.
 Breazeale, J. M., Ariz. [Unnumbered Bul.] 1930.
 Breed, R. S., N. Y. State Bul. 566, 567, 568, 570, 571.
 Brentzel, W. E., N. Dak. Bul. 231.
 Brewbaker, H. E., Minn. Bul. 260.
 Bridgford, R. O., Minn. Bul. 265.
 Brierley, W. G., Minn. Tech. Bul. 69.
 Briggs, F. N., Calif. Hilgardia. V. 4, No. 7.
 Brigham, G. D., Conn. Storrs. Bul. 158.
 Briscoe, C. F., Miss. Tech. Bul. 17.
 Britton, W. E., Conn. State Bul. 305, 315.
 Brodell, A. P., Ark. Bul. 236.
 Brody, Samuel, Mo. Res. Bul. 142, 143.
 Brooker, M. A., Fla. Bul. 217.
 Brooks, A. N., Fla. Bul. 204.
 Brooks, C. P., Vt. Bul. 294.
 Brouse, E. M., Nebr. Bul. 241.
 Brown, A. P., Utah Bul. 213.
 Brown, B. A., Conn. Storrs. Bul. 155, 160, 164.
 Brown, B. E., Me. Bul. 350, 354.
 Brown, H. B., La. Bul. 207, 210.
 Brown, H. M., Mich. Spec. Bul. 191, 197.
 Brown, J. G., Ariz. Bul. 132.
 Brown, M. A., Ohio Bul. 433.
 Brown, P. E., Iowa Bul. 262, 266, 269; Res. Bul. 126, 127, 132; Soil Rpt. 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65.
 Brown, R. M., Minn. Tech. Bul. 57.
 Brown, W. L., Ga. Bul. 160.
 Brown, W. S., Oreg. Bul. 267.
 Bryan, A. A., Iowa Bul. 265.
 Bryan, W. E., Ariz. Tech. Bul. 27.
 Buchanan, D. S., Miss. Bul. 278.
 Buchanan, W. D., Wash. Pop. Bul. 146; West. Wash. Bul. 15-W.
 Buck, M. J., Wis. Bul. 411.
 Buckman, H. O., N. Y. Cornell Bul. 482, 514.
 Bucknam, R. F., N. Y. Cornell Bul. 496.
 Buckner, G. D., Ky. Bul. 291.
 Buie, T. S., S. C. Bul. 261, 262.
 Bull, Sleeter, Ill. Bul. 321, 322, 330, 355.
 Bullis, D. E., Oreg. Bul. 247, 249, 252.
 Burdick, R. T., Colo. Bul. 353.
 Burgess, P. S., Ariz. Tech. Bul. 28.
 Burke, Edmund, Mont. Bul. 222.
 Burkholder, W. H., N. Y. Cornell Mem. 127..
 Burlison, W. L., Ill. Bul. 339, 344, 349.
 Burnett, L. C., Iowa Res. Bul. 130.
 Burnham, D. R., N. Mex. Bul. 176.
 Burns, G. P., Vt. Bul. 298, 311.
 Burns, R. B., W. Va. Bul. 234.
 Burrier, A. S., Oreg. Bul. 245.
 Burt, H. J., Mo. Res. Bul. 125.
 Bushnell, John, Ohio Bul. 430, 462.
 Bushnell, L. D., Kans. Bul. 247.
 Cagle, LeRoy, Va. Bul. 270.
 Call, I. J., N. Y. Cornell Bul. 485.
 Callenbach, E. W., Pa. Bul. 246.
 Camburn, O. M., Vt. Bul. 303.
 Cameron, Hazel, W. Va. Bul. 234.
 Camp, A. F., Fla. Bul. 205, 214.
 Campbell, C. E., Ark. Bul. 240.
 Campbell, M. V., Mo. Res. Bul. 148.
 Campbell, R. C., Ga. Bul. 153, 158.
 Cantwell, L. R., Nebr. Res. Bul. 43.
 Cardon, P. V., Utah Bul. 209, 215, 220.
 Carlyle, E. C., Tex. Bul. 400.
 Carpenter, O. L., Tex. Bul. 409.
 Carrick, D. B., N. Y. Cornell Mem. 122, 131.
 Carroll, W. E., Ill. Bul. 321.
 Cartwright, O. L., S. C. Bul. 257, 266.
 Carver, J. S., Wash. Bul. 231; Pop. Bul. 146; West. Wash. Bul. 15-W.
 Casanova, O. B., Miss. Bul. 272, 286.
 Case, H. C. M., Ill. Bul. 326, 329.
 Case, L. I., Va. Tech. Bul. 39.
 Cathcart, C. S., N. J. Bul. 482, 485, 488, 490, 493, 495, 505, 513, 514.
 Cavert, W. L., Minn. Bul. 262.
 Chamberlin, N. S., N. J. Bul. 500.
 Child, A. M., Minn. Bul. 254.
 Childs, Leroy, Oreg. Bul. 242, 243.
 Chittenden, A. K., Mich. Spec. Bul. 190, 196.
 Chittenden, D. W., Mo. Res. Bul. 143.
 Christ, J. H., Idaho Bul. 169.
 Christensen, J. J., Minn. Tech. Bul. 59, 65.
 Christie, A. W., Calif. Bul. 485, 500.
 Chung, H. L., Hawaii Bul. 60.
 Church, L. M., Pa. Bul. 237.
 Clark, F. H., Mich. Spec. Bul. 191, 197.

- Clark, M. R., Nebr. Bul. 234, 238.
 Clark, Noble, Wis. Bul. 410.
 Clark, T. B., W. Va. Bul. 233.
 Clark, W. H., S. C. Bul. 258.
 Clawson, R. M., Nev. Bul. 117.
 Clayton, E. E., N. Y. State Bul. 564, 576.
 Cleaver, H. M., Ind. Bul. 328.
 Clemmer, H. J., N. Mex. Bul. 176.
 Cline, J. A., Mo. Bul. 293.
 Clinton, G. P., Conn. State Bul. 302, 311.
 Code, W. E., Colo. Bul. 350.
 Coffman, F. A., Colo. Bul. 370, 371.
 Coleman, J. M., Fla. Bul. 219.
 Collins, D. L., N. Y. State Bul. 583.
 Collins, E. V., Iowa Bul. 274.
 Collison, R. C., N. Y. State Bul. 562, 573;
 Tech. Bul. 164, 166, 173.
 Combs, W. B., Minn. Bul. 273.
 Comfort, James, Mo. Res. Bul. 143.
 Conklin, J. G., N. H. Tech. Bul. 40.
 Conn, H. J., N. Y. State Bul. 573; Tech.
 Bul. 172.
 Connaway, J. W., Mo. Bul. 290.
 Connelly, R. G., Conn. Storrs Bul. 167.
 Conner, A. B., Tex. Bul. 411.
 Conner, S. D., Ind. Bul. 329.
 Conrad, J. P., Calif. Bul. 477; Hilgardia,
 V. 4, No. 4.
 Conway, W. T., N. Mex. Bul. 181.
 Cook, W. C., Mont. Bul. 225.
 Cooley, J. L., jr., Miss. Bul. 271, 273, 285.
 Cooley, R. A., Mont. Bul. 238.
 Coombs, Whitney, Va. Bul. 268.
 Cooper, H. P., N. Y. Cornell Bul. 482, 514.
 Cooper, J. R., Ark. Bul. 239.
 Cooper, M. R., Oreg. Bul. 244.
 Copley, T. L., Va. Tech. Bul. 35.
 Copson, G. V., Oreg. Bul. 268.
 Corbett, R. B., R. I. Bul. 220, 223.
 Corkins, C. L., Wyo. Bul. 175.
 Cory, E. N., Md. Bul. 308.
 Coulter, S. T., Minn. Bul. 273.
 Cox, R. F., N. Mex. Bul. 179.
 Crandall, F. K., R. I. Bul. 225.
 Crane, H. L., W. Va. Bul. 236.
 Crawford, C. H., Ohio Bul. 455.
 Crawford, R. F., N. Mex. Bul. 172.
 Crocheron, B. H., Calif. Bul. 493.
 Crosby, C. R., N. Y. Cornell Bul. 498.
 Crowe, L. K., Nebr. Bul. 246.
 Crowley, D. J., Wash. Bul. 230.
 Cruess, W. V., Calif. Bul. 483, 498; Hil-
 gardia, V. 4, No. 9.
 Culbertson, C. C., Iowa Bul. 271, 273.
 Cummings, M. B., Vt. Bul. 308.
 Currence, T. M., Minn. Tech. Bul. 68.
 Currin, R. E., S. C. Bul. 262.
 Curtis, H. E., Ky. Bul. 298, 313.
 Curtis, O. F., N. Y. Cornell Mem. 133.
 Cushman, E. M., N. Y. Corne'l Bul. 492.
 Cutright, C. R., Ohio Bul. 464.
 Dahlberg, A. C., N. Y. State Bul. 581, 585;
 Tech. Bul. 157.
 Dahle, C. D., Pa. Bul. 247.
 Dameron, W. H., Tex. Bul. 407, 409.
 Damon, S. C., R. I. Bul. 217, 224.
 Dana, B. F., Tex. Bul. 393.
 Darlow, A. E., Okla. Bul. 196.
 Darrow, M. A., N. Y. State Tech. Bul. 172.
 Davidson, J. B., Iowa Bul. 260, 274.
 Davies, Esther, Mass. Bul. 263.
 Davis, H. P., Nebr. Res. Bul. 46.
 Dearstyne, R. S., N. C. Bul. 264; Tech. Bul.
 36.
 Deatrick, E. P., W. Va. Bul. 235.
 Decker, G. C., Iowa Res. Bul. 125.
 Decker, S. W., Ill. Bul. 357, 358.
 Delwiche, E. J., Wis. Bul. 408.
 Deming, G. W., Colo. Bul. 369, 370, 371.
 DeTurk, E. E., Ill. Soil Rpt. 42, 43, 44, 45,
 46, 47.
 DeVault, S. H., Md. Bul. 305.
 Dibble, C. B., Mich. Spec. Bul. 204.
 Dickey, J. A., Ark. Bul. 235.
 Dickson, R. E., Tex. Bul. 405, 411.
 Donham, C. R., Minn. Tech. Bul. 73.
 Doran, W. L., Mass. Bul. 254.
 Dorner, W., N. Y. State Tech. Bul. 165.
 Dorsey, Henry, Conn. State Bul. 306.
 Dougherty, J. E., Calif. Bul. 476.
 Douglas, W. A., La. Bul. 214.
 Down, E. E., Mich. Spec. Bul. 191, 197.
 Downes, J. R., N. J. Bul. 502.
 Dreesen, W. H., Oreg. Bul. 257.
 Driggers, B. F., N. J. Bul. 510.
 Drobish, H. E., Calif. Bul. 490.
 Duffee, F. W., Wis. Res. Bul. 102.
 Duggar, J. F., Ala. Bul. 232.
 Dummeier, E. F., Wash. Bul. 242.
 Dunbar, C. O., Mass. Bul. 252, 254.
 Duncan, H. R., Tenn. Bul. 144.
 Dungan, G. H., Ill. Bul. 339.
 Dunkle, P. B., Tex. Bul. 417.
 Dunlavy, Henry, Tex. Bul. 399.
 Dunn, L. C., Conn. Storrs Bul. 163.
 Dunn, Stuart, N. H. Tech. Bul. 44.
 Dunnwald, T. J., Wyo. Bul. 168.
 Dunning, R. G., Vt. Bul. 308.
 Durant, A. J., Mo. Bul. 289, 295; Res. Bul.
 133, 136.
 Durst, C. E., Ill. Bul. 356.
 Dutton, W. C., Mich. Spec. Bul. 203.
 Dvorachek, H. E., Ark. Bul. 247.
 Eastman, M. G., N. H. Bul. 246, 249.
 Eaton, N. A., Md. Bul. 308.
 Eckles, C. H., Minn. Bul. 258.
 Eddins, A. H., Fla. Bul. 210.
 Eddy, C. L., S. C. Bul. 256, 258, 265.
 Edmond, J. B., Mich. Spec. Bul. 193.
 Edwards, F. M., Oreg. Bul. 271.
 Edwards, P. R., Ky. Bul. 296.
 Edwards, W. E. J., Mich. Spec. Bul. 199,
 200.
 Eheart, J. F., Va. Tech. Bul. 38, 41.
 Eide, C. J., Minn. Tech. Bul. 65.
 Einset, Olav, N. Y. State Bul. 577; Tech.
 Bul. 159, 162.
 Eke, P. A., Idaho Bul. 173; Wash. Bul. 244;
 W. Va. Bul. 221, 224.

- Elder, Cecil, Wyo. Bul. 172.
 Ellenberger, H. B., Vt. Bul. 295, 299, 300, 312.
 Ellenwood, C. W., Ohio Bul. 434, 456.
 Ellett, W. B., Va. Tech. Bul. 38, 41.
 Elliott, F. F., Ind. Bul. 342; Kans. Bul. 251; Mich. Spec. Bul. 206; Minn. Bul. 268; Nebr. Bul. 244; S. Dak. Bul. 238.
 Ellison, J. M., Va. Bul. 273.
 Elvehjem, C. A., Wis. Bul. 409.
 Emmel, M. W., Mich. Tech. Bul. 103.
 Englehorn, A. J., Iowa Bul. 269; Soil Rpt. 62.
 Enlow, C. R., Fla. Bul. 209.
 Erdman, H. E., Calif. Bul. 475, 501.
 Erdman, L. W., Iowa Bul. 262.
 Erikson, S. E., Ky. Bul. 304.
 Erwin, A. T., Iowa Bul. 263.
 Esau, Katherine, Calif. Hilgardia, V. 4, No. 14.
 Etheridge, W. C., Mo. Bul. 280; Res. Bul. 131.
 Evalul, E. E., N. J. Bul. 483, 497, 512.
 Evvard, J. M., Iowa Bul. 271, 273; Res. Bul. 118, 133.
 Eyer, J. R., N. Mex. Bul. 172.
 Ezekiel, Mordecai, Minn. Bul. 270.
 Ezekiel, W. N., Minn. Tech. Bul. 67.
 Fagan, F. N., Pa. Bul. 253.
 Fant, G. W., N. C. Bul. 268.
 Fargo, J. M., Wis. Bul. 409.
 Farley, H. B., Md. Bul. 307, 312.
 Farr, A. G., N. H. Bul. 242.
 Farrall, A. W., Calif. Bul. 466, 468, 469.
 Farris, N. F., N. J. Bul. 512.
 Fernald, H. T., Mass. Bul. 261.
 Fernandes, Grace, Okla. Bul. 197.
 Fetrow, W. W., Okla. Bul. 186.
 Finn, W. G., Ky. Bul. 292, 312.
 Finnell, H. H., Okla. Bul. 190, 191, 192, 193.
 Fischer, A. J., N. J. Bul. 502.
 Fisher, H. J., Conn. State Bul. 300.
 Fisher, S. J., N. H. Bul. 254.
 Fiske, J. G., N. J. Bul. 484, 492.
 Fitch, C. P., Minn. Tech. Bul. 73.
 Fite, A. B., N. Mex. Bul. 171, 174, 180.
 Flanders, S. E., Calif. Hilgardia, V. 4, No. 16.
 Flint, W. P., Ill. Bul. 344, 359.
 Flor, H. H., La. Bul. 212.
 Fluke, C. L., Wis. Res. Bul. 93.
 Foley, R. C., Mass. Bul. 262.
 Folsom, Donald, Me. Bul. 352.
 Forman, L. W., Iowa Bul. 269; Soil Rpt. 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65.
 Forster, G. W., N. C. Bul. 267, 270.
 Foster, J. E., N. C. Bul. 272.
 Foster, L. G., Ohio Bul. 458.
 Foster, M. T., Mo. Bul. 293.
 Fourt, D. L., Idaho Bul. 163.
 Fox, F. E., Oreg. Bul. 262.
 Frank, A. H., Mo. Res. Bul. 145, 150.
 Fraps, G. S., Tex. Bul. 400, 402, 403, 412, 414, 415, 418.
 Frayer, J. M., Vt. Bul. 313, 314, 315, 316, 317, 318.
 Frayser, M. E., S. C. Bul. 260, 263, 268.
 Frederick, H. J., Utah Bul. 223.
 Freeman, J. F., Ky. Bul. 299.
 Friedemann, W. G., Ga. Bul. 154.
 Friend, R. B., Conn. State Bul. 304.
 Friend, W. H., Tex. Bul. 419.
 Fritz, J. C., N. H. Bul. 248, 253.
 Fry, H. E., Mo. Bul. 293.
 Fudge, B. R., N. J. Bul. 504.
 Fuhrman, W. U., Calif. Bul. 475.
 Fuller, F. D., Tex. Bul. 404, 420.
 Fuller, J. G., Wis. Res. Bul. 102.
 Fuller, O. M., N. Dak. Bul. 232.
 Fullilove, W. T., Ga. Bul. 157, 165.
 Funk, E. M., Pa. Bul. 250.
 Furr, J. R., N. Y. Cornell Bul. 499.
 Gabbard, L. P., Tex. Bul. 395, 413.
 Gabriel, H. S., Del. Bul. 161, 165.
 Gaines, E. F., Wash. Bul. 241.
 Gaines, J. C., jr., Tex. Bul. 394.
 Gainey, P. L., Kans. Tech. Bul. 26.
 Galloway, Z. L., Ky. Bul. 292, 312.
 Garber, R. J., W. Va. Bul. 237.
 Garcia, Fabian, N. Mex. Bul. 174, 182.
 Gardner, F. D., Pa. Bul. 252.
 Gardner, V. R., Mich. Spec. Bul. 195.
 Garey, L. F., Minn. Bul. 257, 268.
 Garlock, F. L., Iowa Res. Bul. 129.
 Garman, Philip, Conn. State Bul. 301, 313.
 Garner, E. S., R. I. Bul. 217.
 Garnett, W. E., Va. Bul. 267, 274.
 Garrett, O. F., Ill. Bul. 360.
 Garrison, E. R., Mo. Res. Bul. 128.
 Garver, H. L., Wash. Bul. 231; Pop. Bul. 147.
 Gaston, T. L., jr., Tex. Bul. 395.
 Gates, F. C., Kans. Tech. Bul. 25.
 Gault, Lelah, Ky. Bul. 298, 313.
 Gaylord, F. C., Ind. Bul. 328, 336.
 Geise, F. W., Md. Bul. 311, 312, 318, 320.
 Gentry, C. C., Colo. Bul. 355.
 Georgeson, C. C., Alaska. Bul. 8.
 Gerhardt, Fisk, Iowa Res. Bul. 131.
 Gerlaugh, Paul, Ohio Bul. 463.
 Gershoy, Alexander, Vt. Bul. 325.
 Gevorkiantz, S. R., Minn. Tech. Bul. 60; Wis. Res. Bul. 98.
 Giese, Henry, Iowa Bul. 267.
 Gieseker, L. F., Mont. Bul. 228.
 Gifford, Warren, Mo. Bul. 274, 275.
 Gilbert, C. H., Wyo. Bul. 166.
 Gilbert, C. W., N. Y. Cornell Bul. 506, 507.
 Gildow, E. M., Idaho Bul. 168.
 Gile, B. M., Ark. Bul. 237, 245.
 Giles, J. K., Ga. Bul. 153.
 Gilligan, G. M., Del. Bul. 166; Mass. Bul. 252, 254.
 Gillis, M. C., Ill. Bul. 320, 361.
 Glasgow, Hugh, N. Y. State Bul. 582; Tech. Bul. 171.

- Glidden, B. I., N. H. Bul. 246, 252.
 Glover, G. H., Colo. Bul. 358.
 Glover, L. C., N. H. Tech. Bul. 39.
 Goss, J. F., S. Dak. Bul. 244.
 Goss, R. W., Nebr. Res. Bul. 44, 47.
 Gouaux, C. B., La. Bul. 203, 211.
 Graham, Robert, Ill. Bul. 343.
 Gramlich, H. J., Nebr. Bul. 252.
 Gratz, L. O., Fla. Bul. 220, 222.
 Gray, D. S., Iowa Soil Rpt. 54, 59, 64.
 Gray, D. T., Ark. Bul. 246, 257.
 Gray, Greta, Nebr. Bul. 234, 238.
 Greaves, J. E., Utah Bul. 210.
 Greer, S. J., Miss. Bul. 275.
 Greve, E. W., Ohio Bul. 466.
 Griffee, Fred, Okla. Bul. 187.
 Grimes, J. C., Ala. Bul. 231, 233, 234.
 Grimes, M. F., Pa. Bul. 254.
 Grimes, W. E., Kans. Bul. 251.
 Griswold, G. H., N. Y. Cornell Bul. 474.
 Grundmeier, E. G., Wyo. Bul. 162.
 Guba, E. F., Mass. Bul. 248.
 Guilbert, H. R., Calif. Bul. 481; *Hilgardia*,
 V. 5, No. 5.
 Guinness, C. I., Mass. Bul. 270.
 Gustafson, A. F., N. Y. Cornell Bul. 514.
 Guthrie, E. S., N. Y. Cornell Bul. 477.

 Haber, E. S., Iowa Bul. 263; Res. Bul. 120.
 Hackleman, J. C., Ill. Bul. 349.
 Haigh, L. D., Mo. Bul. 270, 276, 284, 292.
 Hale, Fred, Tex. Bul. 410.
 Hale, R. F., Md. Bul. 321.
 Haley, D. E., Pa. Bul. 240.
 Halgrim, A. O., S. Dak. Bul. 248.
 Hall, D. G., Ark. Bul. 256.
 Hall, I. F., N. Y. Cornell Bul. 478.
 Halverson, J. O., N. C. Tech. Bul. 39.
 Hamilton, C. H., Va. Bul. 267, 273.
 Hamilton, C. M., West. Wash. Bul. 17-W.
 Hamilton, H. G., Fla. Bul. 202.
 Hamilton, T. S., Ill. Bul. 323.
 Hammar, C. H., Mo. Bul. 291.
 Hammer, B. W., Iowa Res. Bul. 123, 134.
 Hammond, W. E., Iowa Bul. 271.
 Hampson, C. C., Wash. Bul. 242.
 Hansen, H. C., Idaho Bul. 174.
 Hansen, M. C., Minn. Bul. 252.
 Hansen, N. E., S. Dak. Bul. 237, 240, 246,
 254.
 Hansen, P. A., N. Y. State Tech. Bul. 158.
 Hanson, H. C., Colo. Bul. 356, 360.
 Haring, C. M., Calif. *Hilgardia*, V. 4, No. 12.
 Harlan, J. D., N. Y. State Bul. 562; Tech.
 Bul. 164, 173.
 Harman, S. W., N. Y. State Bul. 579.
 Harned, H. H., Miss. Tech. Bul. 17.
 Harper, Claude, Ind. Bul. 333, 343, 344.
 Harrington, F. M., Mont. Bul. 233, 235.
 Hart, E. B., Wis. Bul. 409, 417.
 Hart, G. H., Calif. *Hilgardia*, V. 5, No. 5.
 Hart, W. J., Md. Bul. 315.
 Harter, W. L., Iowa Bul. 275.
 Hartman, Glen, Wyo. Bul. 164, 170.
 Hartman, Henry, Oreg. Bul. 242, 247, 254.
 Hartman, W. A., Wis. Bul. 406.

 Hartzler, A. J., Ohio Bul. 441.
 Haskell, A. C., Mo. Res. Bul. 130.
 Hauck, C. W., Ohio Bul. 443.
 Hauter, L. H., N. Mex. Bul. 186, 187.
 Hawkins, R. S., Ariz. Bul. 129, 135.
 Hawthorn, L. R., N. Y. State Bul. 580.
 Hawthorne, H. W., Ky. Bul. 305; N. C. Bul.
 267.
 Hayden, C. C., Ohio Bul. 455.
 Hayes, F. M., Calif. *Hilgardia*, V. 4, No.
 12.
 Hayes, H. K., Minn. Bul. 260.
 Hays, F. A., Mass. Bul. 258, 259, 264.
 Headen, W. P., Colo. Bul. 362, 363, 364.
 Headley, F. B., Nev. Bul. 116, 117, 118,
 119, 120.
 Heald, F. D., Wash. Bul. 241.
 Hechler, F. G., Pa. Bul. 241.
 Hedges, Harold, Nebr. Bul. 244.
 Hedrick, W. O., Mich. Tech. Bul. 107.
 Hefebower, R. B., Idaho Bul. 166, 172.
 Heinicke, A. J., N. Y. Cornell Bul. 497.
 Helm, C. A., Mo. Bul. 269, 280, 294; Res.
 Bul. 131.
 Helser, M. D., Iowa Bul. 272.
 Henderson, C. N., N. J. Bul. 486, 502.
 Henderson, E. W., Mo. Res. Bul. 149.
 Henderson, H. O., W. Va. Bul. 230, 231,
 232, 235.
 Hendrickson, A. H., Calif. Bul. 479.
 Hendrickson, C. I., Conn. Storrs Bul. 165.
 Hening, J. C., N. Y. State Tech. Bul. 161.
 Henning, G. F., Ohio Bul. 438, 440.
 Henning, W. L., Pa. Bul. 255.
 Henricksen, H. C., P. R. Bul. 33.
 Henry, B. S., Calif. *Hilgardia*, V. 4, No.
 12.
 Henry, D. H., S. C. Bul. 259, 267.
 Herreld, E. O., Minn. Tech. Bul. 63.
 Herrick, G. W., N. Y. Cornell Bul. 474.
 Heukelekian, Houhaness, N. J. Bul. 486,
 489, 502.
 Heuser, G. F., N. Y. Cornell Mem. 126.
 Hibbard, B. H., Wis. Bul. 406.
 Hibbard, R. P., Mich. Tech. Bul. 104.
 Higgins, B. B., Ga. Bul. 161, 162.
 Hill, E. B., Mich. Spec. Bul. 187, 206.
 Hill, R. C., Mo. Res. Bul. 148.
 Hills, J. L., Vt. Bul. 302, 307, 319, 322,
 323, 324.
 Hirst, C. T., Utah Bul. 210.
 Hitchcock, J. A., Vt. Bul. 292.
 Hobson, L. G., Ind. Bul. 332.
 Hodges, J. A., Kans. Bul. 251.
 Hodgkiss, H. E., N. Y. State Tech. Bul.
 163.
 Hodgson, R. E., Minn. Bul. 252, 263.
 Hoefle, O. M., N. Y. State Bul. 565.
 Hoerner, J. L., Md. Bul. 310.
 Hoffman, A. H., Calif. Bul. 482, 499; *Hil-*
 gardia, V. 5, No. 2.
 Hofmann, F. W., Va. Bul. 269.
 Hogan, A. G., Mo. Res. Bul. 122, 123, 124,
 136, 143.
 Holbert, J. R., Ill. Bul. 354.

- Holdaway, C. W., Va. Tech. Bul. 38, 41.
 Holland, E. B., Mass. Bul. 252, 254.
 Hollinger, E. C., N. Mex. Bul. 182.
 Holmes, C. L., Iowa Bul. 256.
 Holtz, H. F., Wash. Bul. 243.
 Hootman, H. D., Mich. Spec. Bul. 188.
 Hoover, M. M., W. Va. Bul. 237.
 Hopkins, J. A., jr., Iowa Bul. 261, 264, 270.
 Hopper, T. H., N. Dak. Bul. 236, 240.
 Horner, J. T., Mich. Spec. Bul. 189.
 Horsfall, J. G., N. Y. Cornell Mem. 130; N. Y. State Bul. 586.
 Hostetler, E. H., N. C. Bul. 272.
 Hotchkiss, W. S., Tex. Bul. 406.
 House, M. C., Iowa Res. Bul. 120.
 Houser, J. S., Ohio Bul. 454.
 Howarth, J. A., Calif. Hilgardia, V. 4, No. 13.
 Howe, C. B., N. J. Bul. 487, 506, 515.
 Howe, F. B., N. Y. Cornell Bul. 482.
 Howe, G. H., N. Y. State Bul. 578.
 Howell, L. D., Ga. Bul. 165; Okla. Bul. 185.
 Hucker, A. M., N. Y. State Bul. 584; Tech. Bul. 153, 154, 155.
 Hucker, G. J., N. Y. State Bul. 584; Tech. Bul. 153, 154, 155, 167.
 Hockett, H. C., N. Y. State Tech. Bul. 148.
 Huddleson, I. F., Mich. Tech. Bul. 98, 100, 103.
 Huelsen, W. A., Ill. Bul. 329, 361.
 Huffman, C. F., Mich. Tech. Bul. 105.
 Hughes, H. D., Iowa Bul. 257, 265.
 Hull, F. E., Ky. Bul. 296.
 Hull, W. W., Miss. Bul. 288; Tech. Bul. 18.
 Hultz, F. S., Wyo. Bul. 174.
 Hume, A. N., S. Dak. Bul. 245, 253.
 Humphrey, E. N., Idaho Bul. 175.
 Humphrey, G. C., Wis. Bul. 417.
 Humphries, W. R., Minn. Bul. 256; N. Dak. Bul. 225; Pa. Bul. 237.
 Hungerford, C. W., Idaho Res. Bul. 7.
 Hunter, Byron, Idaho Bul. 173; Wash. Bul. 244.
 Hunter, J. E., Mo. Res. Bul. 136.
 Hurd, C. J., Oreg. Bul. 268.
 Hurd, E. B., Iowa Bul. 259, 268.
 Hurst, W. M., N. Dak. Bul. 225.
 Hurt, R. H., Va. Tech. Bul. 36.
 Hussong, R. V., Iowa Res. Bul. 134.
 Hutcheson, T. B., Va. Tech. Bul. 35.
 Hutchins, A. E., Minn. Tech. Bul. 58.
 Hutchison, R. E., Oreg. Bul. 270.
 Hutson, J. B., Ky. Bul. 292; Tex. Bul. 395.
 Hutton, S. B., N. J. Bul. 491.
 Hypes, J. L., Conn. Storrs Bul. 161.
 Hyslop, G. R., Oreg. Bul. 246.
 Iddings, E. J., Idaho Bul. 164, 170.
 Immer, F. R., Minn. Bul. 260; Tech. Bul. 59.
 Inge, Creagh, Wis. Res. Bul. 96.
 Ingham, L. W., Md. Bul. 316, 319.
 Ingram, J. W., La. Bul. 214.
 Insko, W. M., jr., Ky. Bul. 294, 304; W. Va. Bul. 230.
 Irvin, C. J., Pa. Bul. 252.
 Isely, Dwight, Ark. Bul. 232, 248.
 Jackson, H. C., Wis. Bul. 411.
 Jacob, H. E., Calif. Bul. 471.
 Jacob, Moses, Tenn. Bul. 143, 144.
 Janssen, George, Ark. Bul. 234.
 Jefferson, L. P., Mass. Bul. 250.
 Jeffries, C. D., Pa. Bul. 244.
 Jehle, R. A., Md. Bul. 317.
 Jenkins, E. H., Conn. State Bul. 309; Conn. Storrs Bul. 168.
 Jenkins, E. W., Vt. Bul. 308.
 Jenkins, J. M., La. Bul. 205.
 Jenny, Hans, Mo. Res. Bul. 152.
 Jensen, I. J., Mont. Bul. 233.
 Jensen, J. H., Nebr. Bul. 240.
 Jensen, W. C., S. C. Bul. 264.
 Jewett, H. H., Ky. Bul. 293, 297.
 Johnson, Edward C., Wash. Bul. 237, 245.
 Johnson, Edwin C., Ky. Bul. 302, 311.
 Johnson, E. M., Ky. Bul. 306, 309.
 Johnson, James, Wis. Bul. 412, 413; Res. Bul. 87, 95, 104.
 Johnson, M. B., N. Dak. Bul. 237; S. Dak. Bul. 255.
 Johnson, M. S., Minn. Bul. 259.
 Johnson, N. W., Wash. Bul. 238, 239.
 Johnson, O. R., Mo. Bul. 269; Res. Bul. 148.
 Johnson, P. R., Tex. Bul. 406.
 Johnson, R. E., Conn. Storrs Bul. 153, 154, 159, 167.
 Johnson, R. P. A., Minn. Tech. Bul. 70.
 Johnson, S. E., Mont. Bul. 218, 220, 237, 239.
 Johnson, T. D., Va. Bul. 266.
 Johnson, W. T., Oreg. Bul. 273.
 Johnston, P. E., Ill. Bul. 326.
 Johnston, Stanley, Mich. Spec. Bul. 188, 202.
 Jones, C. H., Vt. Bul. 295.
 Jones, D. F., Conn. State Bul. 310.
 Jones, D. L., Tex. Bul. 396.
 Jones, I. R., Oreg. Bul. 264, 272.
 Jones, J. M., Tex. Bul. 405, 407, 409.
 Jones, J. S., Oreg. Bul. 249.
 Jones, M. M., Mo. Bul. 286, 287.
 Jordan, P. S., Minn. Bul. 272.
 Joseph, W. E., Mont. Bul. 236.
 Josephson, H. B., Pa. Bul. 237, 238; [Un-numbered Pub.] 1929.
 Joslyn, M. A., Calif. Hilgardia, V. 4, No. 9.
 Kalkus, J. W., West. Wash. Bul. 14-W, 18-W.
 Kammlade, W. G., Ill. Bul. 338.
 Karper, R. E., Tex. Bul. 396.
 Kaupp, B. F., N. C. Bul. 264; Tech. Bul. 36.
 Keith, J. I., Pa. Bul. 247.
 Kelley, V. W., Ill. Bul. 341, 348, 353.

- Kempster, H. L., Mo. Bul. 288; Res. Bul. 122, 124, 143.
 Kendall, J. C., N. H. Bul. 238, 250.
 Kendrick, J. B., Calif. Hilgardia, V. 5, No. 1.
 Kendrick, M. S., Conn. Storrs Bul. 166; N. Y. Cornell Bul. 484, 511.
 Kennard, D. C., Ohio Bul. 437.
 Kennedy, Wellington, Miss. Bul. 267.
 Kensler, G. M., N. Y. Cornell Bul. 504.
 Kern, F. D., Pa. Bul. 239.
 Kernohan, George, Calif. Bul. 494.
 Kertesz, Z. I., N. Y. State Bul. 589.
 Kezer, Alvin, Colo. Bul. 369, 370, 371.
 Kiesselbach, T. A., Nebr. Res. Bul. 51.
 Kifer, R. S., Iowa Bul. 270; Miss. Bul. 276; Va. Bul. 272.
 Killough, D. T., Tex. Bul. 399, 416.
 King, B. M., Mo. Bul. 280; Res. Bul. 131.
 King, F. G., Ind. Bul. 330.
 Kingsley, F. C., Ill. Bul. 332.
 Kinney, E. J., Ky. Bul. 299.
 Kirkpatrick, E. L., Wis. Res. Bul. 96.
 Kirkpatrick, R. T., Mo. Bul. 278.
 Kirkpatrick, W. F., Conn. Storrs Bul. 156.
 Kiser, O. M., Minn. Bul. 261.
 Kittredge, Dorothea, Minn. Tech. Bul. 72.
 Kittredge, Joseph, jr., Mich. Spec. Bul. 190; Minn. Tech. Bul. 60, 70.
 Klages, K. H., S. Dak. Bul. 244, 256.
 Klemmedson, G. S., Colo. Bul. 355, 361, 368; N. C. Bul. 267.
 Knandel, H. C., Pa. Bul. 246.
 Knapp, J. G., N. C. Bul. 276.
 Knott, J. E., N. Y. Cornell Bul. 510; Pa. Bul. 244.
 Knowlton, F. L., Oreg. Bul. 253.
 Knowlton, G. F., Utah Bul. 212, 216, 221.
 Knowlton, H. E., W. Va. Bul. 222.
 Knox, C. W., Iowa Bul. 258; Res. Bul. 119, 128.
 Knox, J. H., Ill. Bul. 328.
 Koehler, Benjamin, Ill. Bul. 354.
 Kohn, F. J., Wyo. Bul. 169, 172.
 Kolb, J. H., Wis. Res. Bul. 96.
 Koonce, Dwight, Colo. Bul. 370, 371.
 Kramer, J., Nebr. Res. Bul. 43.
 Krantz, F. A., Minn. Tech. Bul. 58.
 Kraybill, H. R., N. H. Tech. Bul. 41.
 Krueger, M. E., Calif. Bul. 474.
 Krusekopf, H. H., Mo. Bul. 264, 269.
 Kumlien, W. F., S. Dak. Bul. 250.
 Kyzer, E. D., S. C. Bul. 262.
 Lackey, J. B., N. J. Bul. 489.
 Lacy, I. O., N. J. Bul. 486, 489, 502.
 Laible, R. J., Ill. Bul. 321.
 Laird, A. S., Fla. Bul. 211.
 LaMaster, J. P., S. C. Bul. 254, 255.
 LaMont, T. E., N. Y. Cornell Bul. 495.
 Lampman, C. E., Idaho Bul. 168.
 Lamson, G. H., jr., Conn. Storrs Bul. 157.
 Landauer, Walter, Conn. Storrs Bul. 163.
 Langford, G. S., Colo. Bul. 354.
 Lanham, W. B., Ga. Bul. 157.
 Lantow, J. L., N. Mex. Bul. 173, 185.
 Larrabee, E. S., Oreg. Bul. 258.
 Lasting, L. D., Va. Tech. Bul. 41.
 Latzke, Esther, N. Dak. Bul. 239, 242.
 Laude, H. H., Kans. Bul. 250.
 Laurie, Alex. Mich. Spec. Bul. 194.
 LeClerc, E. L., Colo. Bul. 351.
 Lee, A. M., Wyo. Bul. 172.
 Lee, O. C., Wash. Bul. 235.
 Leeb, Constance, N. Dak. Bul. 239.
 Lehman, S. G., N. C. Bul. 268.
 Lehmann, E. W., Ill. Bul. 332.
 Leland, E. W., N. Y. Cornell Mem. 134.
 Leukel, W. A., Fla. Bul. 215, 219.
 Lewis, E. B., Nebr. Bul. 235, 236, 245, 249.
 Lewis, M. T., Pa. Bul. 248.
 Libbert, M. S., Ark. Bul. 249.
 Ligon, L. L., Okla. Bul. 187.
 Lindgren, H. A., Oreg. Bul. 265.
 Lindsey, J. B., Mass. Bul. 253, 255.
 Lindstrom, E. W., Iowa Res. Bul. 133.
 Lininger, F. F., Pa. Bul. 245.
 Linney, C. E., N. Mex. Bul. 182.
 List, G. M., Colo. Bul. 352.
 Lively, C. E., Ohio Bul. 467, 468.
 Livesay, E. A., W. Va. Bul. 225.
 Lloyd, J. W., Ill. Bul. 319, 334, 346, 350.
 Lloyd, O. G., Ind. Bul. 332.
 Locklin, H. D., West. Wash. Bul. 13-W, 16-W.
 Lockwood, J. E., N. Y. Cornell Bul. 502.
 Lodewick, J. E., Va. Bul. 276.
 Loeffel, W. J., Nebr. Bul. 251.
 Lomas, C. H., Mo. Res. Bul. 159.
 Long, J. D., Calif. Bul. 472.
 Long, L. E., Miss. Bul. 269, 276, 282.
 Longley, L. E., Idaho Res. Bul. 8.
 Longwell, J. H., Ill. Bul. 322, 330, 355; W. Va. Bul. 230.
 Loomis, C. P., N. C. Bul. 275.
 Lott, R. V., Colo. Bul. 367.
 Lowe, Belle, Iowa Bul. 272.
 Lowry, P. R., N. H. Bul. 243; Tech. Bul. 39.
 Lucas, P. S., Mich. Spec. Bul. 201.
 Lundy, Gabriel, S. Dak. Bul. 244.
 Lunn, A. G., Oreg. Bul. 262.
 Lush, J. L., Tex. Bul. 405, 407, 409.
 Lutman, A. S., Vt. Bul. 306, 322.
 Lutman, B. F., Vt. Bul. 296, 297.
 Lyon, T. L., N. Y. Cornell Bul. 500; Mem. 134.
 McAlpine, J. G., Conn. Storrs Bul. 153, 154, 156, 158.
 McBride, C. G., Ohio Bul. 469.
 McCallan, S. E. A., N. Y. Cornell Mem. 128.
 McCarty, E. C., Calif. Hilgardia, V. 5, no. 4.
 McCarty, M. A., Pa. Bul. 254.
 McClelland, C. K., Ark. Bul. 241.
 McCollam, M. E., West. Wash. Bul. 11-W.
 McColly, H. F., N. Dak. Bul. 244, 245.
 McCool, M. M., Mich. Spec. Bul. 192, 205.
 McCormick, F. A., Conn. State Bul. 302.

- McCubbin, E. N., Mo. Res. Bul. 138.
 McCue, A. C., Del. Bul. 162, 167.
 McCullough, A. D., Pa. Bul. 247.
 MacDaniels, L. H., N. Y. Cornell Bul. 497, 499; Mem. 133.
 McDonough, T. F., Ohio Bul. 442.
 McGehee, T. F., Miss. Bul. 286.
 McGeorge, W. T., Ariz. Tech. Bul. 30.
 MacGillivray, J. H., Ind. Bul. 336.
 McIntyre, A. G., Pa. Bul. 236.
 Mack, M. J., Mass. Bul. 268.
 McKay, Hughina, Ohio Bul. 433, 465.
 McKenzie, F. F., Mo. Res. Bul. 143.
 MacKenzie, P. C., Pa. Bul. 255.
 McKibben, E. G., Calif. Bul. 482.
 Mackie W. W., Calif. Bul. 467.
 McKittrick, E. J., Wyo. Bul. 162, 165.
 McNall, F. J., Mich. Spec. Bul. 193.
 McNess, G. T., Tex. Bul. 416.
 Macy, Harold, Minn. Tech. Bul. 64.
 Magistad, O. C., Ariz. Tech. Bul. 25.
 Magness, J. R., Wash. Bul. 236.
 Magruder, Roy, Ohio Bul. 447.
 Mallory, W. T., Miss. Bul. 275.
 Mangels, C. E., N. Dak. Bul. 225.
 Mangelsdorf, P. C., Tex. Bul. 397.
 Mann, H. B., N. C. Bul. 263, 266.
 Marble, D. R., N. Y. Cornell Bul. 503.
 Marckworth, G. D., La. Bul. 209.
 Marcovitch, Simon, Tenn. Bul. 140.
 Margolf, P. H., Pa. Bul. 246, 250.
 Markey, J. F., Conn. Storrs Bul. 161.
 Marquardt, J. C., N. Y. State Bul. 581; Tech. Bul. 157.
 Marshall, R. E., Mich. Spec. Bul. 188.
 Marston, A. R., Mich. Spec. Bul. 204.
 Martin, H. M., Nebr. Res. Bul. 43, 49.
 Martin, J. H., Ky. Bul. 291, 294, 304.
 Martin, Nelson, Ark. Bul. 255.
 Mathews, S. J., Ga. Bul. 159.
 Mathiesen, H. A., Idaho Bul. 163.
 Matsui, Toshihide, Mich. Spec. Bul. 201.
 Maxton, J. L., Va. Bul. 272, 275.
 Maynard, E. J., Iowa Bul. 273.
 Mead, S. W., Calif. Bul. 478.
 Meade, Devoe, Md. Bul. 316, 319.
 Meldrum, H. R., Iowa Bul. 269; Soil Rpt. 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65.
 Melvin, B. L., N. Y. Cornell Bul. 487, 493, 501, 504.
 Menefee, E. R., Ind. Bul. 334.
 Mensching, J. E., N. Y. State Tech. Bul. 166.
 Merchant, C. H., Me. Bul. 351, 355.
 Merrill, R. M., Mont. Bul. 230.
 Metzger, C. H., Colo. Bul. 359.
 Metzger, Hutzal, Minn. Bul. 251; Pa. Bul. 245.
 Michael, S. T., Calif. Bul. 486; Hilgardia, V. 4, No. 8.
 Middleton, R. M., Ga. Bul. 155.
 Mighell, R. L., Mass. Bul. 251.
 Miller, J. C., N. Y. Cornell Bul. 488.
 Miller, M. F., Mo. Bul. 264, 269.
 Miller, M. W., Wash. Pop. Bul. 146; West. Wash. Bul. 15-W.
 Miller, P. E., Minn. Bul. 265.
 Miller, R. C., N. Dak. Bul. 225.
 Miller, R. L., Fla. Bul. 203.
 Mills, H. S., N. Y. Cornell Bul. 509.
 Mills, W. D., N. Y. Cornell Bul. 498; Mem. 123.
 Mitchell, H. H., Ill. Bul. 323.
 Mitchell, J. A., Wis. Res. Bul. 91.
 Mittelman, E. B., Oreg. Bul. 260, 261.
 Mohr, C. O., Ill. Bul. 359.
 Monroe, C. F., Ohio Bul. 455.
 Montague, E. J., Mass. Bul. 262.
 Moody, R. I., Vt. Bul. 312, 315.
 Mooers, C. A., Tenn. Bul. 141, 142.
 Mook, D. E., Mich. Spec. Bul. 201.
 Moore, A. N., Ark. Bul. 233; Ga. Bul. 153; Okla. Bul. 198.
 Moore, H. R., Ohio Bul. 459.
 Moore, Pren, Idaho Bul. 168.
 Moore, Robert, La. Bul. 209.
 Morgan, E. L., Mo. Res. Bul. 148.
 Morgan, G. W., Mont. Bul. 235.
 Morgan, M. F., Conn. State Bul. 306, 311, 320.
 Morgan, R. F., Nebr. Res. Bul. 46.
 Morison, F. L., Ohio Bul. 453.
 Morris, H. E., Mont. Bul. 227, 231.
 Morris, V. H., Ohio Bul. 441.
 Morrow, K. S., S. C. Bul. 254, 255.
 Morse, F. W., Mass. Bul. 265.
 Mortensen, Martin, Iowa Bul. 267.
 Mortimer, G. B., Wis. Bul. 414.
 Moser, A. M., S. C. Bul. 268.
 Moses, B. D., Calif. Bul. 495, 496.
 Mowry, Harold, Fla. Bul. 204, 205, 221.
 Mrak, E. M., Calif. Bul. 483.
 Muenschner, W. C., N. Y. Cornell Bul. 508.
 Mumford, F. B., Mo. Bul. 272, 276, 285, 292.
 Mumford, H. W., Ill. Bul. 326.
 Munn, M. T., N. Y. State Bul. 565, 587.
 Murdock, H. E., Mont. Bul. 229.
 Murneek, A. E., Mo. Bul. 283; Res. Bul. 138.
 Murphy, H. F., Okla. Bul. 188, 189.
 Murwin, H. F., Conn. State Bul. 311; Wis. Res. Bul. 104.
 Muse, Marianne, Vt. Bul. 294.
 Myers, C. E., Pa. Bul. 248.
 Myers, P. B., Del. Bul. 160, 166.
 Nance, R. E., N. C. Bul. 272.
 Nebel, B. R., N. Y. State Tech. Bul. 170.
 Neethling, J. C., N. Y. Cornell Bul. 483.
 Neil, Berniece, R. I. Bul. 221.
 Neiswander, R. B., Ohio Bul. 457.
 Neller, J. R., Wash. Bul. 235.
 Nelson, A. L., Wyo. Bul. 161, 173.
 Nelson, Martin, Ark. Bul. 242, 255.
 Nelson, M. N., Oreg. Bul. 263.
 Nelson, P. M., Iowa Bul. 272; Res. Bul. 120.
 Nesbitt, L. L., N. Dak. Bul. 236.
 Nesom, G. H., Minn. Bul. 252, 263.

- Nettles, W. C., S. C. Bul. 265.
 Neubrech, W. L., Ind. Bul. 335.
 Newell, H. M., Ill. Bul. 334, 350.
 Newell, Wilmon, Fla. Bul. 221.
 Newhall, A. G., Ohio Bul. 451, 461.
 Newlander, J. A., Vt. Bul. 295, 299.
 Newsom, I. E., Colo. Bul. 372.
 Newton, G. A., West. Wash. Bul. 13-W.
 Nibler, C. W., Mo. Res. Bul. 150.
 Nicholls, W. D., Ky. Bul. 303, 305, 307.
 Nichols, M. L., Ala. Bul. 229.
 Nichols, P. F., Calif. Bul. 479, 485, 500.
 Nightingale, G. T., N. J. Bul. 494, 499, 507, 509.
 Nixon, M. W., N. Y. State Bul. 583.
 Noll, C. F., Pa. Bul. 252.
 Norris, L. C., N. Y. Cornell Mem. 126.
 Norris, R. K., Oreg. Bul. 254.
 Norton, E. A., Ill. Soil Rpt. 45, 46.
 Norton, J. B. S., Md. Bul. 323.
 Norton, L. J., Ill. Bul. 324, 351, 363.
 Norton, W. J., Calif. Bul. 493.

 O'Byrne, Wilbur, Va. Bul. 266.
 Odland, T. E., R. I. Bul. 224, 225; W. Va. Bul. 227, 235.
 Ogden, W. B., Wis. Bul. 412, 413; Res. Bul. 95, 104.
 O'Kane, W. C., N. H. Tech. Bul. 39, 40.
 O'Kelly, J. F., Miss. Bul. 288; Tech. Bul. 18.
 Oliver, A. W., Oreg. Bul. 255, 269.
 Olson, F. C., Ill. Bul. 355.
 Olson, Otto, Pa. Bul. 240.
 Olson, T. M., S. Dak. Bul. 236, 252.
 O'Neal, A. M., Iowa Soil Rpt. 57, 60, 62.
 Orrben, C. L., Iowa Soil Rpt. 58, 61, 63.
 Orton, C. R., Pa. Bul. 239.
 Oswald, E. I., Md. Bul. 317.
 Overholser, E. L., Calif. Bul. 496, 497.
 Overman, O. R., Ill. Bul. 325, 360.
 Overpeck, J. C., N. Mex. Bul. 181.
 Owen, F. V., Me. Bul. 350, 354.
 Owen, W. B., Minn. Tech. Bul. 71.
 Owen, W. L., jr., Tex. Bul. 394.
 Oyler, Merton, Ky. Bul. 300, 301.

 Pack, H. J., Utah Bul. 216, 221.
 Page, J. F., Okla. Bul. 194.
 Palmer, C. C., Del. Bul. 163.
 Parker, J. R., Mont. Bul. 223.
 Parker, K. W., Calif. Bul. 503.
 Parker, S. L., Calif. Hilgardia, V. 4, No. 1.
 Parks, R. R., Mo. Bul. 268.
 Parrott, P. J., N. Y. State Bul. 582.
 Parsons, C. H., Mass. Bul. 262.
 Partridge, N. H., Mich. Tech. Bul. 106.
 Paschal, L. J., Wyo. Bul. 174.
 Patil, V. H., Iowa Res. Bul. 123.
 Patton, C. A., Ohio Bul. 445.
 Patty, R. L., S. Dak. Bul. 239, 241, 251, 252.
 Pearce, S. D., Tex. Bul. 420.
 Pederson, C. S., N. Y. State Bul. 570; Tech. Bul. 150, 151, 167, 168, 169.

 Pedlow, J. T., N. J. Bul. 486.
 Peltier, G. L., Nebr. Bul. 240; Res. Bul. 52.
 Perkins, W. R., Miss. Bul. 274.
 Peter, A. M., Ky. Bul. 291.
 Peters, W. H., Minn. Bul. 261, 272.
 Petersen, W. E., Minn. Tech. Bul. 63.
 Peterson, A. G., Va. Tech. Bul. 37.
 Peterson, M. W., Colo. Bul. 365, 366.
 Peterson, William, Utah Bul. 209.
 Peturson, Bjorn, Minn. Tech. Bul. 65.
 Phillips, C. D., Ky. Bul. 302.
 Phillips, E. F., N. Y. Cornell Mem. 121.
 Phillips, T. G., N. H. Bul. 237, 245, 248, 253, 254; Tech. Bul. 42.
 Phipps, W. J., Va. Tech. Bul. 40.
 Phipps, C. R., Me. Bul. 356.
 Phipps, I. F., N. Y. Cornell Mem. 125.
 Pickrell, K. P., Ariz. Bul. 134.
 Pieper, J. J., Ill. Bul. 344.
 Pierce, W. H., Idaho Res. Bul. 7.
 Pilcher, Robert, Mo. Res. Bul. 143.
 Pillsbury, A. E., N. H. Bul. 247.
 Pinckney, R. M., Mont. Bul. 222.
 Pingrey, H. B., Colo. Bul. 353.
 Pittman, D. W., Utah Bul. 219.
 Plagge, H. H., Iowa Res. Bul. 131.
 Plath, C. H., N. Dak. Bul. 229, 234.
 Plummer, C. C., N. H. Bul. 247.
 Pond, G. A., Minn. Bul. 256, 266, 270.
 Poole, R. F., N. C. Bul. 263, 265, 273, 274; Tech. Bul. 35, 38.
 Pope, W. T., Hawaii Bul. 58, 59, 61.
 Potter, E. L., Oreg. Bul. 255, 265, 269, 271.
 Potter, G. F., N. H. Tech. Bul. 41, 42.
 Powell, Whiton, N. Y. Cornell Bul. 505.
 Powers, LeRoy, Mont. Bul. 234.
 Pratt, A. D., Conn. Storrs Bul. 169.
 Pressley, E. H., Ariz. Tech. Bul. 27.
 Price, B. M., N. J. Bul. 503.
 Price, F. E., Oreg. Bul. 255, 262, 268.
 Price, H. B., Ky. Bul. 311; Minn. Bul. 251.
 Price, J. C. C., Miss. Bul. 277, 279, 281, 284.
 Prickett, P. S., N. Y. State Bul. 571.
 Prince, A. L., N. J. Bul. 498.
 Proebsting, E. L., Calif. Hilgardia, V. 4, No. 2, V. 5, No. 3.
 Pucher, G. W., Conn. State Bul. 311.
 Pyle, N. J., Mass. Bul. 257.

 Quinby, J. R., Tex. Bul. 396.

 Ragsdale, A. C., Mo. Bul. 274, 275, 281; Res. Bul. 142, 143.
 Raleigh, W. P., Iowa Res. Bul. 124.
 Rankin, J. O., Nebr. Bul. 248.
 Rankin, W. H., N. Y. State Tech. Bul. 160.
 Rapp, Miriam, Ind. Bul. 339.
 Rasmussen, M. P., N. Y. Cornell Bul. 494.
 Rather, H. C., Mich. Spec. Bul. 191.
 Rawlins, T. E., Calif. Hilgardia, V. 4, No. 15.
 Ray, G. S., Ohio Bul. 442, 460.

- Rea, H. E., Tex. Bul. 399.
 Reed, H. S., Calif. Bul. 484.
 Reed O. E., Mich. Tech. Bul. 105.
 Rees, L. W., Minn. Bul. 271.
 Regan, M. J., Mo. Res. Bul. 142.
 Regan, W. M., Calif. Bul. 468.
 Reid, W. H. E., Mo. Bul. 267; Res. Bul. 126, 127, 128, 134, 135, 137.
 Reimer, F. C., Oreg. Bul. 254.
 Reinhard, H. J., Tex. Bul. 401.
 Renard, E. J., Wis. Res. Bul. 101.
 Rettger, L. F., Conn. Storrs Bul. 153, 154, 156.
 Reuss, G. H., La. Bul. 215, 218.
 Reuszer, H. W., N. J. Bul. 512.
 Reynolds, E. B., Tex. Bul. 398, 408.
 Reynoldson, L. A., Minn. Bul. 256; N. Dak. Bul. 225.
 Rice, J. B., Ill. Bul. 321.
 Richards, Griffith, Wis. Bul. 414.
 Richards, Preston, Mo. Res. Bul. 139, 146.
 Riddell, F. T., Mich. Spec. Bul. 187, 189, 206.
 Ridenour, G. M., N. J. Bul. 502.
 Riley, H. K., Ind. Bul. 331.
 Riley, J. E. jr., Conn. State Bul. 314.
 Rinear, E. H., N. H. Bul. 241, 251.
 Ripperton, J. C., Hawaii Bul. 60.
 Ritzman, E. G., N. H. Bul. 240; Tech. Bul. 43.
 Robbins, P. W., Mich. Spec. Bul. 196.
 Robbins, W. R., N. J. Bul. 499, 509.
 Robert, J. C., Miss. Bul. 285.
 Roberts, E. H., Wash. Bul. 234.
 Roberts, George, Ky. Bul. 299.
 Roberts, R. H., Wis. Bul. 415, Res. Bul. 94.
 Robertson, A. H., Vt. Bul. 314, 315, 316, 317, 318.
 Robertson, D. W., Colo. Bul. 369, 370, 371.
 Robinson, J. L., Iowa Bul. 257, 265.
 Robinson, R. H., Oreg. Bul. 242, 259.
 Robison, W. L., Ohio Bul. 452.
 Roche, B. H., Wis. Res. Bul. 102.
 Rodenwold, B. W., Oreg. Bul. 250.
 Rogers, R. H., S. Dak. Bul. 238, 249.
 Romanoff, A. L., N. Y. Cornell Mem. 132.
 Rosen, H. R., Ark. Bul. 244.
 Ross, Hugh, Md. Bul. 322.
 Rozman, David, Mass. Bul. 266.
 Rudolfs, Willem, N. J. Bul. 486, 489, 496, 502.
 Ruehe, H. A., Ill. Bul. 333, 345, 352.
 Ruehle, G. L. A., Mich. Tech. Bul. 102.
 Runnells, R. A., Va. Bul. 265.
 Rupel, I. W., Wis. Bul. 404, Res. Bul. 102.
 Ruprecht, R. W., Fla. Bul. 218.
 Russell, B. A., S. C. Bul. 264.
 Russell, H. L., Wis. Bul. 405, 410.
 Russell, L. B., Mo. Res. Bul. 134.
 Salmon, S. C., Kans. Bul. 248.
 Sampson, A. W., Calif. Bul. 503; Ill.-gardia, V. 5, No. 4.
 Sanborn, Ruby, Mass. Bul. 259, 264.
 Sanders, D. A., Fla. Bul. 206.
 Sanders, J. T., Okla. Bul. 195, 198.
 Sanmann, F. P., Ill. Bul. 325, 345.
 Sauve, E. C., Mich. Spec. Bul. 198.
 Saville, R. J., La. Bul. 216, 217, 218.
 Sawyer, C. E., West. Wash. Bul. 12-W, 17-W.
 Sayre, C. B., Ill. Bul. 336.
 Schafer, E. G., Wash. Bul. 235.
 Schermerhorn, L. G., N. J. Bul. 499, 509.
 Schilling, G. S., Idaho Bul. 168.
 Schilling, S. J., Ark. Bul. 238.
 Schlenker, F. S., N. H. Bul. 237, 245.
 Schmidt, Robert, N. C. Bul. 263, 265.
 Schmitz, Henry, Minn. Tech. Bul. 70.
 Schneider, E. C., Conn. Storrs Bul. 168.
 Schneider, W. E., Calif. Bul. 473.
 Schneiderhan, F. J., Va. Tech. Bul. 36; W. Va. Bul. 238.
 Scholl, C. A., Mich. Tech. Bul. 107.
 Schollander, E. G., N. Dak. Bul. 227, 235.
 Scholz, H. F., Wis. Res. Bul. 88.
 Schoth, H. A., Oreg. Bul. 246.
 Schulze, A. F., Conn. Storrs Bul. 157.
 Schumacher, F. X., Calif. Bul. 491.
 Schuster, C. E., Oreg. Bul. 245.
 Schuster, G. L., Del. Bul. 164.
 Schwalen, H. C., Ariz. Bul. 133.
 Schwantes, A. J., Minn. Bul. 250, 256.
 Schwaradt, H. H., Ark. Bul. 256.
 Scoates, Daniels, Tex. Bul. 411.
 Scott, E. L., Ind. Bul. 340.
 Scoville, G. P., N. Y. Cornell Bul. 495; Pa. Bul. 260.
 Scudder, H. D., Oreg. Bul. 250.
 Sears, O. H., Ill. Bul. 349.
 Seielstad, H. E., N. Dak. Bul. 225.
 Selby, H. E., Oreg. Bul. 248, 250, 251.
 Semple, A. T., Ark. Bul. 247.
 Serviss, G. H., Ariz. Bul. 129.
 Severance, George, Idaho Bul. 173; Wash. Bul. 244.
 Severin, H. H. P., Calif. Bul. 465; Ill.-gardia, V. 3, No. 18; V. 3, No. 20.
 Sewell, W. E., Ala. Bul. 233, 234.
 Shattuck, Obil, Oreg. Bul. 270.
 Shaw, J. N., Oreg. Bul. 266.
 Shear, E. V., N. Y. State Bul. 575.
 Shearer, P. S., Iowa Res. Bul. 133.
 Shedd, O. M., Ky. Bul. 308.
 Shepperd, J. H., N. Dak. Bul. 230.
 Sherburne, R. E., Mass. Bul. 256.
 Sherman, Franklin, III, Tex. Bul. 394.
 Sherwood, F. W., N. C. Tech. Bul. 39.
 Shirky, S. B., Mo. Bul. 272, 285.
 Shoemaker, J. S., Ohio Bul. 454, 466.
 Shrewsbury, C. L., Mo. Res. Bul. 122, 124.
 Shriner, R. L., N. Y. State Tech. Bul. 152.
 Sievers, F. J., Mass. Bul. 247, 260.
 Silcox, W. B., Wis. Res. Bul. 103.
 Simms, B. T., Oreg. Bul. 266.
 Singleton, H. P., Wash. Bul. 240.
 Singleton, W. R., Conn. State Bul. 310.
 Sipple, O. H., N. Y. State Bul. 587.
 Sitton, B. G., Mich. Tech. Bul. 99.
 Skinner, G. R., Mo. Res. Bul. 127.

- Skinner, J. H., Ind. Bul. 330.
 Skinner, J. J., Fla. Bul. 218; Ga. Bul. 151;
 N. C. Bul. 266.
 Slate, G. L., N. Y. State Bul. 588.
 Slate, W. L., Conn. State Bul. 312, 318;
 Conn. Storrs Bul. 155, 162, 168.
 Smick, A. A., Wash. Bul. 233.
 Smith, A. D. B., Iowa Res. Bul. 133.
 Smith, Alfred, Calif. Hilgardia, V. 4, No.
 3; V. 4, No. 10.
 Smith, B. T., Me. Bul. 355.
 Smith, C. W., Nebr. Bul. 247.
 Smith, F. B., Iowa Res. Bul. 126, 127.
 Smith, H. V., Ariz. Bul. 130, 131.
 Smith, L. H., Ill. Soil Rpt. 42, 43, 44, 45,
 46, 47.
 Smith, L. J., Wash. Pop. Bul. 147.
 Smith, L. M., Calif. Bul. 505.
 Smith, Ora, Calif. Hilgardia, V. 4, No. 11.
 Smith, R. A., Ill. Bul. 321.
 Smith, R. S., Ill. Soil Rpt. 42, 43, 44, 45,
 46, 47.
 Smith, R. W., N. Dak. Bul. 231.
 Smith, T. O., N. H. Bul. 237, 245, 248, 253,
 254.
 Snapp, R. R., Ill. Bul. 328.
 Snyder, E. B., Nebr. Res. Bul. 48.
 Snyder, W. P., Nebr. Bul. 239, 243.
 Sorenson, C. J., Utah Bul. 218.
 Sparhawk, W. N., Wis. Bul. 406.
 Spears, H. D., Ky. Bul. 295, 310.
 Spencer, Leland, N. Y. Cornell Bul. 486.
 Sprague, H. B., N. J. Bul. 483, 497, 512.
 Spuler, Anthony, Wash. Bul. 232.
 Spurway, C. H., Mich. Tech. Bul. 101.
 Stadler, L. J., Mo. Bul. 278, 287.
 Stakman, E. C., Minn. Tech. Bul. 59, 65.
 Stanley, E. B., Ariz. Bul. 134.
 Stanley, W. W., Tenn. Bul. 140.
 Starch, A. E., Mont. Bul. 230.
 Stearns, L. A., Ohio Bul. 457.
 Steenbock, Harry, Wis. Bul. 409.
 Stehr, W. C., Minn. Tech. Bul. 75.
 Stene, A. E., R. I. Bul. 226.
 Sterges, A. J., Tex. Bul. 412.
 Stern, J. K., Pa. Bul. 242, 256.
 Stevens, O. A., N. Dak. Bul. 241, 243.
 Stevenson, G. L., S. Dak. Bul. 242, 243.
 Stevenson, W. H., Iowa Bul. 266, 269; Res.
 Bul. 126; Soil Rpt. 54, 55, 56, 57, 58, 59,
 60, 61, 62, 63, 64, 65.
 Stewart, C. L., Ill. Bul. 324, 326.
 Stewart, F. C., N. Y. State Tech. Bul. 171.
 Stewart, George, Utah Bul. 211, 219, 222.
 Stewart, R. E., Iowa Bul. 275.
 Stewart, Sidney, La. Bul. 204.
 Stinson, T. B., Kans. Bul. 250.
 Stirniman, E. J., Calif. Bul. 477.
 Stoa, T. E., N. Dak. Bul. 225, 244.
 Stokdyk, E. A., Calif. Bul. 501.
 Stokes, W. E., Fla. Bul. 209, 215.
 Stout, A. B., N. Y. State Bul. 577.
 Strand, A. B., Mich. Spec. Bul. 193.
 Straszheim, R. E., Ohio Bul. 442, 460.
 Street, O. E., Conn. State Bul. 311.
 Streeter, L. R., N. Y. State Bul. 562, 579;
 Tech. Bul. 160.
 Strubinger, L. H., Ill. Bul. 346.
 Stubbs, F. H., Va. Bul. 274.
 Sturlaugson, Victor, N. Dak. Bul. 228, 244.
 Sudds, R. H., Pa. Bul. 253.
 Sullivan, J. T., N. H. Tech. Bul. 41.
 Sure, Barnett, Ark. Bul. 250, 251, 252.
 Swanback, T. R., Conn. State. Bul. 299,
 311.
 Swartwout, H. G., Mo. Bul. 265.
 Sweetman, H. L., Mass. Bul. 261; Wyo.
 Bul. 167.
 Swenk, M. H., Nebr. Res. Bul. 50.
 Szymoniak, Boleslaus, La. Bul. 206, 213.
 Takahashi, W. N., Calif. Hilgardia, V. 4,
 No. 15.
 Talbott, M. W., Idaho Bul. 165.
 Tate, J. N., Tex. Bul. 413.
 Taubenhaus, J. J., Tex. Bul. 393.
 Tavernetti, J. R., Calif. Bul. 495.
 Taylor, C. A., Calif. Bul. 489.
 Taylor, C. C., Va. Bul. 275.
 Taylor, W. C., Ala. Bul. 233, 234.
 Templeton, G. S., Miss. Bul. 268, 270.
 Tennant, J. L., N. Y. Cornell Bul. 479;
 R. I. Bul. 219, 224.
 Terrell, W. G., Ky. Bul. 295, 310.
 Thalman, R. R., Nebr. Bul. 252.
 Theophilus, D. R., Idaho Bul. 174.
 Thomas, C. A., Pa. Bul. 259.
 Thomas, F. L., Tex. Bul. 394.
 Thomas, H. E., N. Y. Cornell Mem. 123.
 Thomas, R. P., Wis. Res. Bul. 105.
 Thomas, W. P., Utah Bul. 214, 217.
 Thompson, C. H., Mass. Bul. 267; N. Y.
 Cornell Bul. 480, 509.
 Thompson, M. J., Minn. Bul. 250.
 Thompson, O. A., N. Dak. Bul. 226.
 Thompson, R. L., La. Bul. 208.
 Thomsen, F. L., Mo. Bul. 267, 273, 277;
 Res. Bul. 137, 139, 146, 151.
 Thorne, G. B., Mo. Bul. 273.
 Throckmorton, R. I., Kans. Bul. 248.
 Thrun, F. M., Mich. Tech. Bul. 96.
 Thurston, H. W., jr., Pa. Bul. 239.
 Tilford, P. E., Ohio Bul. 432.
 Tobey, E. R., Me. Bul. 352, 354.
 Towle, R. S., Wyo. Bul. 163, 171.
 Tracy, P. H., Ill. Bul. 333, 345, 352.
 Traub, H. P., Tex. Bul. 419.
 Traum, Jacob, Calif. Hilgardia, V. 4, No.
 12.
 Tripp, D. J., Colo. Bul. 349.
 Trout, G. M., W. Va. Bul. 229.
 Trowbridge, E. A., Mo. Bul. 293; Res. Bul.
 143.
 Trowbridge, P. F., N. Dak. Bul. 233.
 Truog, Emil, Wyo. Bul. 168.
 Tu, Chih, Minn. Tech. Bul. 74.
 Tucker, C. K., N. Y. Cornell Bul. 473.
 Tucker, H. H., N. J. Bul. 508.
 Tukey, H. B., N. Y. State Bul. 563, 569,
 574.

- Tullis, E. C., Mich. Tech. Bul. 97.
 Tunncliffe, E. A., Ill. Bul. 343.
 Turk, L. M., Mo. Res. Bul. 132.
 Turner, C. W., Mo. Bul. 287; Res. Bul. 130, 140, 145, 147, 150.
 Turner, J. D., Ky. Bul. 295, 310.
 Tuttle, A. R., Ohio Bul. 460.
 Tysdal, H. M., Nebr. Res. Bul. 52.
 Tyson, James, Mich. Spec. Bul. 205; Tech. Bul. 108.
 Uhland, R. E., Mo. Bul. 271, 279.
 Valleau, W. D., Ky. Bul. 309.
 Van Alstyne, L. M., N. Y. State Bul. 577.
 Vandenburg, J. T., jr., Pa. Bul. 260.
 Van Es, Leunis, Nebr. Res. Bul. 43, 49.
 Van Eسلتine, G. P., N. Y. State Tech. Bul. 149.
 Vass, A. F., Wyo. Bul. 164, 170.
 Vaughan, L. M., N. Y. Cornell Bul. 490.
 Veihmeyer, F. J., Calif. Bul. 479; Hilgardia, V. 4, No. 4.
 Venstrom, Crus, Nev. Bul. 118, 120.
 Verner, Leif, Idaho Bul. 167.
 Vernon, J. J., Va. Bul. 266, 272.
 Vestal, C. M., Ind. Bul. 341.
 Vickery, H. B., Conn. State Bul. 311.
 Vincent, C. C., Idaho Bul. 167; Res. Bul. 8.
 Voorhies, E. C., Calif. Bul. 473.
 Wackerman, A. E., Wis. Res. Bul. 90.
 Waddill, J. T., Mo. Bul. 269.
 Wade, B. L., Wis. Res. Bul. 97.
 Waite, W. C., N. J. Bul. 506.
 Walbridge, N. L., Vt. Bul. 296.
 Walker, A. L., N. Mex. Bul. 177, 186, 187.
 Walker, Dilworth, N. Y. Cornell Bul. 475.
 Walker, G. P., Ind. Bul. 329.
 Walker, L. S., Vt. Bul. 293, 301, 305, 309, 320, 321.
 Walker, M. N., Fla. Bul. 213, 214.
 Walker, W. P., Md. Bul. 304, 305, 315.
 Wallace, H. F., Miss. Bul. 271, 287.
 Wallace, Q. W., Iowa Bul. 273.
 Walster, H. L., N. Dak. Bul. 240.
 Walts, C. C., Ark. Bul. 249.
 Ware, J. O., Ark. Bul. 234, 243, 253.
 Ware, L. M., Miss. Bul. 280.
 Warner, J. D., S. C. Bul. 262.
 Warren, D. C., Kans. Bul. 252.
 Wasson, G. E., S. Dak. Bul. 247.
 Waters, N. F., R. I. Bul. 218.
 Watkins, W. E., N. Mex. Bul. 178, 179.
 Watson, J. R., Fla. Bul. 204, 209.
 Watts, R. L., Pa. Bul. 243, 258.
 Waugh, F. A., Mass. Bul. 267.
 Weakley, C. E., jr., W. Va. Bul. 231.
 Weaver, H. J., R. I. Bul. 222.
 Weaver, L. A., Mo. Bul. 266.
 Weber, A. D., Nebr. Bul. 250.
 Weber, G. F., Fla. Bul. 207, 208, 212.
 Weeks, David, Calif. Hilgardia, V. 3, No. 17.
 Wehrle, L. P., N. Y. Cornell Bul. 481, 489.
 Weinard, F. F., Ill. Bul. 357, 358.
 Weir, W. W., Calif. Bul. 464.
 Welborne, W. W., Miss. Bul. 274, 285.
 Welch, F. F., Mo. Res. Bul. 135.
 Weldin, J. C., R. I. Bul. 218, 222.
 Wellington, Richard, N. Y. State Bul. 577, 580.
 Wellman, H. R., Calif. Bul. 487, 488.
 Wells, H. M., Mich. Spec. Bul. 188.
 Wells, O. V., N. Mex. Bul. 186, 187.
 Welton, F. A., Ohio Bul. 441.
 Wentworth, S. W., N. H. Tech. Bul. 41.
 Wentz, J. B., Iowa Res. Bul. 121.
 Werkman, C. H., Iowa Res. Bul. 117.
 Werner, H. O., Nebr. Res. Bul. 44, 45.
 Wertz, V. R., Ohio Bul. 450.
 Wessels, P. H., N. Y. Cornell Bul. 509.
 West, C. H., Calif. Bul. 480, 501.
 West, Erdman, Fla. Bul. 212.
 Westgate, W. A., N. H. Tech. Bul. 39.
 Westover, Georgia, Fla. Bul. 216.
 Wharton, M. F., Ariz. Bul. 133.
 Wheeler, W. P., N. Y. State Bul. 572.
 Whetzel, H. H., N. Y. Cornell Mem. 128.
 Whitcomb, W. D., Mass. Bul. 249.
 Whitcomb, Warren, jr., Wis. Res. Bul. 92.
 White, G. C., Conn. Storrs Bul. 153, 154, 159, 167, 169.
 White, H. L., Vt. Bul. 299.
 White, T. H., Md. Bul. 309, 314.
 White, W. E., Vt. Bul. 311.
 Whitehouse, W. E., Md. Bul. 315.
 Whitson, A. R., Wis. Bul. 416.
 Whittemore, Margaret, R. I. Bul. 221.
 Whittle, C. A., Ga. Bul. 156.
 Wiancko, A. T., Ind. Bul. 329.
 Wiant, D. E., S. Dak. Bul. 251.
 Wiant, J. S., N. Y. Cornell Mem. 124.
 Wickens, D. L., N. C. Bul. 270.
 Wiecking, E. H., Mo. Bul. 269.
 Wiegand, E. H., Oreg. Bul. 252.
 Wiggans, C. B., Ark. Bul. 239, 254.
 Wiggans, C. C., Nebr. Bul. 237.
 Wiggans, R. G., N. Y. Cornell Bul. 491.
 Wiggin, W. W., Ohio Bul. 439, 449.
 Wilcox, L. P., Oreg. Bul. 267.
 Wilcox, R. H., Ill. Bul. 329.
 Wileden, A. F., Wis. Res. Bul. 96.
 Wiley, J. R., Ind. Bul. 337.
 Wilfong, H. S., N. C. Bul. 264; Tech. Bul. 36.
 Wilgus, H. S., N. Y. Cornell Mem. 126.
 Willard, R. E., N. Dak. Bul. 232.
 Williams, C. B., N. C. Bul. 266.
 Williams, C. G., Ohio Bul. 431, 446.
 Williams, F. M., N. Y. Cornell Bul. 502.
 Williamson, J. T., Ala. Bul. 228, 232.
 Willis, R. L., N. J. Bul. 485, 513.
 Wilson, A. L., Utah Bul. 211.
 Wilson, B. B., Ill. Bul. 351.
 Wilson, B. D., N. Y. Cornell Mem. 134.
 Wilson, C. V., W. Va. Bul. 235.
 Wilson, F. G., Wis. Bul. 407; Res. Bul. 90.
 Wilson, H. F., Wis. Res. Bul. 92.
 Wilson, H. K., Minn. Bul. 264.
 Wilson, J. D., Ohio Bul. 461.
 Wilson, J. F., Calif. Hilgardia, V. 3, No. 19, V. 4, No. 5.

- Wilson, J. W., S. Dak. Bul. 252.
Wilson, Maud, Oreg. Bul. 256.
Wilster, Gustav, Oreg. Bul. 258.
Winkler, A. J., Calif. Bul. 492; *Hilgardia*,
V. 4, No. 6.
Winter, A. R., Ohio Bul. 436.
Winter, J. D., Minn. Tech. Bul. 61, 66.
Withycombe, Robert, Oreg. Bul. 271.
Wolf, J. G., Conn. State Bul. 311.
Wolff, S. E., Tex. Bul. 393.
Wood, D. C., Mo. Bul. 269.
Wood, I. D., Nebr. Bul. 245.
Woodbridge, M. E., N. Y. State Bul. 565,
587.
Woodroof, J. G., Ga. Bul. 150, 163, 164.
Woodside, J. W., N. C. Tech. Bul. 35.
Woodworth, C. M., Ill. Bul. 335.
Wooley, J. C., Mo. Bul. 271.
Wooten, H. H., N. C. Bul. 267, 271.
Wright, C. C., Wash. Pop. Bul. 145.
Wright, K. E., Ill. Bul. 325; Mass. Bul.
269.
Wright, Turner, S. Dak. Bul. 252.
Wrigley, P. I., Pa. Bul. 257.
Wyche, R. H., Tex. Bul. 398.
Yale, M. W., N. Y. State Tech. Bul. 156.
Yocum, W. W., Mo. Res. Bul. 138.
Yoder, F. R., Wash. Bul. 233.
Young, E. C., Ind. Bul. 342.
Young, G. E., Ind. Bul. 338.
Young, H. C., Ohio Bul. 448.
Young, P. A., Mont. Bul. 227, 231.
Young, V. H., Ark. Bul. 234.
Yount, H. W., Mass. Bul. 256.
Zahnley, J. W., Kans. Bul. 249.
Zappe, M. P., Conn. State Bul. 301.
Zeasman, O. R., Wis. Res. Bul. 99.
Zeller, P. J. A., N. J. Bul. 486, 489.
Ziegler, P. T., Pa. Bul. 255.
Zimmerman, C. C., Minn. Bul. 253, 255,
269.
Zon, Raphael, Wis. Res. Bul. 88, 89, 90,
91, 98.

INDEX OF SUBJECTS

Aberdeen-Angus cattle. (*See* Cattle.)

Abortion—

- in cattle, Conn. Storrs Bul. 153, 154;
Del. Bul. 163; Mich. Tech. Bul. 98;
Minn. Tech. Bul. 73; Mo. Bul. 290;
Nebr. Res. Bul. 46.
- in swine, Ill. Bul. 343.

Accounts, household, Vt. Bul. 294.

Actinomyces scabies, Nebr. Res. Bul. 44.

Adco, in artificial manure production,
Iowa Res. Bul. 126.

Adobe construction, Calif. Bul. 472.

Agencies, service, N. Y. Cornell Bul. 493.

Agglutination test—

- abortion, Conn. Storrs Bul. 153;
Minn. Tech. Bul. 73.
- bacillary white diarrhea, Calif. Bul.
486; Ky. Bul. 296.
- for *Bacterium pullorum* carriers, Calif.
Hilgardia, V. 4, No. 8.

"Aggressin," immunization against an-
thrax, Ark. Bul. 238.

Agricultural cooperation, N. J. Bul. 487.

Agricultural credit—

- and selling price of land, Calif. Hil-
gardia, V. 3, No. 17.
- Arkansas, Ark. Bul. 233, 237.
- California, Calif. Bul. 504.
- cost and management, N. C. Bul. 270.
- cotton farmers, Ga. Bul. 153; Okla.
Bul. 198.
- Craighead County, Ark. Bul. 233.
- cropper farmers, N. C. Bul. 271.
- Kentucky, Ky. Bul. 311.
- long term loans, Iowa banks, Iowa
Res. Bul. 129.
- Louisiana, La. Bul. 208.
- use, value and cost, Calif. Bul. 480.

Agricultural industry, income from, Ohio
Bul. 450.

Agricultural machinery. (*See* Machinery.)

Agricultural marketing act, N. C. Bul. 276.

Agricultural production—

- and distribution, to meet demands,
Beckley area, W. Va. Bul. 226.
- and distribution, to meet demands,
Wheeling area, W. Va. Bul. 228.
- Flathead irrigation project, Mont. Bul.
237.
- Illinois, Ill. Bul. 326.
- indexes, Minn. Tech. Bul. 72.
- Minnesota, Minn. Bul. 257, 268.
- problems, economic analysis, Mont.
Bul. 220.
- statistics. (*See* Agriculture, statis-
tics.)

Agricultural production—Continued.

- to meet demands, Beckley area, W.
Va. Bul. 226.
- to meet demands, Clifton Forge-
Covington area, Va. Bul. 266.
- to meet demands, Wheeling area, W.
Va. Bul. 228.

Agricultural products—

- cost of production, Miss. Bul. 269.
- market requirements, Me. Bul. 355.
- prices, Ill. Bul. 351, 363; Md. Bul.
321; Mo. Res. Bul. 151; N. Dak.
Bul. 232; Utah Bul. 217; Va. Tech.
Bul. 37.
- receipts, Beckley area, W. Va. Bul.
226.

Agriculture—

- Bitter Root Valley, economic analysis,
Mont. Bul. 220.
- Connecticut Valley, Conn. Storrs Bul.
165.
- economic problems, Calif. Bul. 504.
- Minnesota, Minn. Bul. 257, 258, Tech.
Bul. 72.
- North Carolina, N. C. Bul. 267.
- roads in relation to, N. Y. Cornell Bul.
479.
- statistics, Ohio Bul. 442, 460.

Air cleaners—

- dusts for testing, Calif. Hilgardia,
V. 5, No. 2.
- for motor vehicles, Calif. Bul. 499.

Airplane dusting, boll weevil, Tex. Bul. 394.

Alfalfa—

- and clover in rotation, Colo. Bul. 362,
363, 364.
- culture, Ill. Bul. 349; Oreg. Bul. 246.
- experiments, Ark. Bul. 242; Minn. Bul.
267.
- for hay, N. J. Bul. 512.
- hay. (*See* Hay, alfalfa.)
- in rotation, Minn. Bul. 265.
- leafhopper on, Ky. Bul. 293.
- pasture, for cattle, Nebr. Bul. 239.
- production, on cut-over lands, Idaho
Bul. 169.
- seed chalcis-fly, Utah Bul. 218.
- varieties, Ill. Bul. 349.
- weevil, physical ecology, Wyo. Bul. 167.
- wilt and cold, susceptibility to, Nebr.
Res. Bul. 52.
- wilt, studies, Nebr. Bul. 240.
- Alkali soils, management, Iowa Bul. 266.
- Almonds, culture, N. Mex. Bul. 171.
- Ameba meleagridis*, Mo. Res. Bul. 133.
- American fowlbrood. (*See* Fowlbrood.)

Amphorophora spp., Minn. Tech. Bul. 61.
Anchylopera angulifaciana, N. Y. Cornell Bul. 489.
 Anemia, in suckling pigs, Wis. Bul. 409.
 Angular leaf spot, cucumbers, Fla. Bul. 207.
 Animal nutrition, laboratory apparatus, N. H. Bul. 240.
 Animals—
 dairy. (See Cattle, dairy.)
 diseases, research work on, Conn. Storrs Bul. 168.
 growth and development, Mo. Res. Bul. 141, 142, 143, 149.
 injurious, Minn. Bul. 259.
 (See also Livestock.)
Anomala orientalis, Conn. State Bul. 304.
 Anthocyanins, in grapes, N. Y. State Tech. Bul. 152.
 Anthrax antigens, sterile, production, Ark. Bul. 238.
Anuraphis roseus, N. Y. State Bul. 582.
Anuraphis spp., Ohio Bul. 464.
 Aphids—
 and leafroll of potatoes, N. Y. State Tech. Bul. 171.
 apple, biology and control, Ohio Bul. 464.
 (See also Green citrus aphid. Pea aphid, Raspberry aphids, Rosy aphid, Woolly apple aphids.)
Aphis idaei, Minn. Tech. Bul. 61.
Aphis rubi and *A. rubicola*, Minn. Tech. Bul. 61.
Aphis spiraeicola, Fla. Bul. 203.
Aplanobacter insidiosum, Nebr. Bul. 240, Res. Bul. 52.
 Apple aphids, biology and control, Ohio Bul. 464.
 Apple industry—
 economic phases, Ark. Bul. 236.
 McIntosh variety, Mont. Bul. 218.
 Apple juice, enzymic clarification, N. Y. State Bul. 589.
 Apple orchards—
 cost of developing, Ohio Bul. 456.
 fertilizer and soil management, Va. Bul. 269.
 fertilizer experiments, N. Y. State Bul. 574.
 Apple scab, spraying materials for, Mich. Spec. Bul. 203.
 Apple tissue, effect of ringing, N. Y. Cornell Mem. 133.
 Apple trees—
 blister canker, Ill. Bul. 340.
 collar rot, Wash. Bul. 236.
 effect of defoliation, N. H. Tech. Bul. 41.
 fire blight, Mich. Tech. Bul. 97.
 grafting, Wis. Res. Bul. 94.
 grafts, defective, Mich. Tech. Bul. 99.
 hardiness and dye adsorption, N. H. Tech. Bul. 44.
 ringing experiments, N. Y. Cornell Mem. 133.

Apple trees—Continued.
 Stayman, effect of fertilizer and cultural treatments, Ark. Bul. 254.
 stock and scion studies, Wis. Res. Bul. 94.
 variability and size relations, N. Y. State Tech. Bul. 164.
 Apples—
 Baldwin, fruit bud formation, N. H. Tech. Bul. 42.
 breeding, Idaho Res. Bul. 8; S. Dak. Bul. 237.
 calcium sulphide spray, Va. Tech. Bul. 36.
 calyx injury, Oreg. Bul. 242.
 consumer demand, Mass. Bul. 250.
 cost of production, Ohio Bul. 435; Wash. Bul. 239.
 cross-pollination, unfruitfulness, N. Y. State Tech. Bul. 159.
 culture, R. I. Bul. 226.
 curculio on, Conn. State Bul. 301; Mass. Bul. 249.
 diseases and insects, N. Y. Cornell Bul. 498.
 effect of freezing on catalase activity, N. Y. Cornell Mem. 122.
 effect of hydrocarbon oils, Ill. Bul. 348.
 fire blight, Ark. Bul. 244.
 fruit bud formation, and spur composition, effect of defoliation, N. H. Tech. Bul. 41.
 fruit bud formation in non-bearing spurs, N. H. Tech. Bul. 42.
 fruit setting, effect of sulfur-dusting, N. Y. Cornell Bul. 499.
 hydrophilic colloids, relation to hardness and dye absorption, N. H. Tech Bul. 44.
 marketing, Ark. Bul. 236; Calif. Bul. 501; Mont. Bul. 218.
 Oldenburg, defoliation, N. H. Tech. Bul. 41.
 packing house, W. Va. Bul. 238.
 perennial canker and woolly apple aphid, Oreg. Bul. 243.
 pollen, effect of dusting sulfur, N. Y. Cornell Bul. 499.
 pollination, Mich. Spec. Bul. 188; Mo. Res. Bul. 138; N. Y. State Bul. 577.
 pollination, cross, and unfruitfulness, N. Y. State Tech. Bul. 159.
 pollination, effect on set of fruit, N. Y. Cornell Bul. 497.
 prices, N. Y. Cornell Bul. 495; Oreg. Bul. 244.
 prices and cost of marketing, Wash. Bul. 242.
 production, economic aspects, Wash. Bul. 239.
 rust diseases, N. Y. Cornell Mem. 123.
 size, effect of thinning, Vt. Bul. 308.
 spray residue removal, N. Y. State Bul. 579.

Apples—Continued.

- storage, acidity changes, Iowa Res. Bul. 131.
- thinning experiments, Vt. Bul. 308.
- varieties, N. Y. State Bul. 563; Pa. Bul. 253; R. I. Bul. 226; W. Va. Bul. 222.
- varieties, prices, yields, acreage, N. Y. Cornell Bul. 495.
- xenia and metaxenia, N. Y. State Tech. Bul. 170.
- yields, N. Y. Cornell Bul. 495.
- (See also Crab apples.)

Apricots—

- drying, Calif. Bul. 485.
- production, Wash. Bul. 238.

Arabinose, fermentation in spoiled tomato products, N. Y. State Tech. Bul. 151.

Archips argyrospila, N. Y. State Bul. 583.

Arkansas agricultural experiment station, report, Ark. Bul. 246, 257.

Arkansas cotton growers' cooperative association, Ark. Bul. 245.

Arsenic, water soluble in spray material, Ohio Bul. 448.

Arsenical spray removal. (See Spray residue removal.)

Arsenical sprays—

- injury to fruit, Ohio Bul. 448.
- relation to calyx injury in apples, Oreg. Bul. 242.

Ascarid roundworm, development and survival of ova, Minn. Tech. Bul. 71.

Asia, fruit markets, Calif. Bul. 493.

Asiatic beetle, control, Conn. State Bul. 304.

Asparagus—

- fertilizing, field and sand culture, Md. Bul. 314.
- prices, Calif. Bul. 487.

Aspen—

- lands, forest possibilities, Minn. Tech. Bul. 60.
- utilization, Minn. Tech. Bul. 70.

Aspidiotus perniciosus, N. H. Tech. Bul. 40.

Asters, yellows, Calif. Hilgardia V. 3, No. 18.

Asynapsis, *Zea mays*, N. Y. Cornell Mem. 129.

Atwater laboratory, dedication, Conn. Storrs Bul. 168.

Atwater, Wilbur Olin, biographical sketch, Conn. Storrs Bul. 168.

Austrian peas and oats for hogs, Ala. Bul. 233.

Avian tuberculosis. (See Tuberculosis.)

Avocado trees, irrigation requirements, Calif. Bul. 489.

Ayrshire cattle. (See Cattle.)

Azotobacter, inoculation experiments, Kans. Tech. Bul. 26.

Babcock test, nonacid, for ice cream, Ill. Bul. 360.

Baby beef—

- effect of sex and feeding, Ill. Bul. 355.
- sweet clover hay for, Minn. Bul. 261.

Baby foods. (See Infant foods.)

Bacillary white diarrhea—

- agglutination and intradermal tests, Calif. Bul. 486.
- and related diseases, Ky. Bul. 296.
- control, West. Wash. Bul. 17-W.
- effect on poultry, Va. Bul. 265.
- studies, N. C. Tech. Bul. 36.
- (See also *Bacterium pullorum*.)

Bacillus amylovorus—

- overwintering and dissemination, Ark. Bul. 244.
- overwintering and modes of infection, Mich. Tech. Bul. 97.

Bacillus anthracis, inoculation for anthrax, Ark. Bul. 238.

Bacillus tuberculosis, typing of strains, Nebr. Res. Bul. 49.

Bacteria—

- acid producing, N. Y. State Tech. Bul. 167.
- aseptically drawn milk, N. Y. State Tech. Bul. 165.
- in butter, Mich. Tech. Bul. 102.
- in sauerkraut, N. Y. State Tech. Bul. 168.
- in spoiled tomato products, N. Y. State Tech. Bul. 150, 151.
- legume, effect of light on longevity, Mo. Res. Bul. 132.
- milk. (See Milk, bacteria.)
- soils, effect of non-nitrogenous compounds on growth, N. Y. State Tech. Bul. 172.
- thermophilic, udder as source, N. Y. State Tech. Bul. 158.

Bacterial blights, celery, Ohio Bul. 461.

Bacterial diseases of bean, N. Y. Cornell Mem. 127.

Bactericides, composition, Conn. State Bul. 300.

Bacterium abortus antigens, Minn. Tech. Bul. 73.

Bacterium apii, Ohio Bul. 461.

Bacterium campestre, N. Y. State Bul. 576.

Bacterium lachrymans, Fla. Bul. 207.

Bacterium medicaginis var. *phaseolicola*, Ga. Bul. 161.

Bacterium pullorum—

- and pullorum disease, West. Wash. Bul. 17-W.
- detection of carriers, Calif. Hilgardia, V. 4, No. 8.
- (See also Bacillary white diarrhea.)

Bahia grass, growth and organic foods, Fla. Bul. 219.

Baking experiments, high altitudes, Colo. Bul. 365, 366.

Bananas, effect of ethylene gas, Mich. Tech. Bul. 104.

Bang's disease. (See Abortion.)

Banks, long term loans, Iowa Res. Bul. 129.

Barium fluosilicate, as insecticide, Tenn. Bul. 140.

- Barley**—
 culture, Mich. Spec. Bul. 191; S. Dak. Bul. 256; Wyo. Bul. 164.
 effect of delayed harvest, Iowa Res. Bul. 130.
 experiments, Colo. Bul. 371.
 for fattening lambs, Okla. Bul. 196.
 for hogs, Nebr. Bul. 251.
 mineral content, Utah Bul. 210.
 on dry land, Colo. Bul. 371.
 production, S. Dak. Bul. 256; Wyo. Bul. 164.
 varieties, Minn. Bul. 264; Wyo. Bul. 164.
 variety tests, Colo. Bul. 371; Mich. Spec. Bul. 191; S. Dak. Bul. 256; W. Va. Bul. 237.
- Basic copper sulfate**, as fungicide, Mass. Bul. 254.
- Bayer dust**, seed treatment, potatoes, N. Y. State Bul. 564.
- Bean leaf beetle**, Ark. Bul. 248; S. C. Bul. 265.
- Beans**—
 and kudzu. "halo spot," Ga. Bul. 161.
 bacterial disease, N. Y. Cornell Mem. 127.
 heredity studies, Minn. Tech. Bul. 68.
 Mexican bean beetle, Mass. Bul. 261; S. C. Bul. 258.
 mosaic disease, studies, Idaho Res. Bul. 7.
- Beckley area**, agricultural production and distribution, W. Va. Bul. 226.
- Beef**—
 cattle. (*See Cattle, beef.*)
 effect of age of animal, Iowa Bul. 272.
 effect of cooking, Mo. Bul. 293.
 effect of sex on quality, Nebr. Bul. 252.
 production, Aberdeen-Angus cattle, Ark. Bul. 247.
 production, prices of steers, Idaho Bul. 172.
 production, relative efficiency of calves and steers, Iowa Bul. 271.
 roasting, Iowa Bul. 272; N. Dak. Bul. 242.
 (*See also Baby beef.*)
- Bees**—
 American foulbrood, Wyo. Bul. 166.
 appendages, variation and correlation, N. Y. Cornell Mem. 121.
 dysentery, relation to digestion of pollen, Wis. Res. Bul. 92.
 in fruit pollination, Mich. Spec. Bul. 188; Mo. Bul. 283.
 metabolism, winter, Wyo. Bul. 175.
- Beet leafhopper**, morphology, Utah Bul. 212.
- Benzol**, in control of ox warble flies, Va. Tech. Bul. 39.
- Berries**—
 cultivation, West. Wash. Bul. 16-W.
 (*See also Blackberries, Blueberries, Dewberries, Huckleberries, Raspberries, Strawberries.*)
- Billings beet region**, farm practices, Mont. Bul. 232.
- Bindweed**. (*See Wild morning-glory.*)
- Birds**—
 of North Dakota, N. Dak. Bul. 241.
 (*See also Pheasants.*)
- Bitter Root Valley**, analysis of production problems, Mont. Bul. 220.
- Black locust**. (*See Locust.*)
- Black root rot**, tobacco, Conn. State Bul. 311.
- Black-rot of cauliflower**, N. Y. State Bul. 576.
- Black spruce**. (*See Spruce.*)
- Blackberries**—
 cultivation, West. Wash. Bul. 16-W.
 culture, La. Bul. 213; Mo. Bul. 265; Ohio Bul. 454.
 diseases and insects, Ohio Bul. 454.
- Blackberry preserves and jelly**, W. Va. Bul. 234.
- Blackhead in turkeys**—
 control by cecal ablation, Mo. Res. Bul. 133.
 transmission, Conn. Storrs Bul. 156.
- Blight**—
 cauliflower, N. Y. State Bul. 576.
 potato, Fla. Bul. 222.
- Blissus leucopterus*, Fla. Bul. 209.
- Blister canker**, apple trees, Ill. Bul. 340.
- Blister rust**, pine, Conn. State Bul. 314.
- Blood-meal protein**, nutritive value, Ohio Bul. 436.
- Blueberries**—
 highbush, propagation, Mich. Spec. Bul. 202.
 insects, Me. Bul. 356.
 production and costs, Me. Bul. 351.
 propagation, Mich. Spec. Bul. 202; Miss. Bul. 280.
- Blueberry farms**, economic study, Me. Bul. 351.
- Blue-gray cattle**. (*See Cattle.*)
- Blunt-nosed leafhopper**, and cranberry false blossom, N. J. Bul. 491.
- Boll weevil**, airplane dusting, Tex. Bul. 394.
- Bone**, ground, analyses and inspection, N. J. Bul. 493.
- Boys**—
 boys' and girls' clubs, effect on school work, Va. Bul. 274.
 high school education, S. Dak. Bul. 250.
 money income, N. Y. Cornell Bul. 512.
- Bread**—
 baking at high altitudes, Colo. Bul. 366.
 from Wyoming flour, Wyo. Bul. 162.
- Breakpins**, metal vs. wood, Calif. Bul. 482.
- Brittany cattle**. (*See Cattle.*)
- Bronchitis** in poultry, Calif. Bul. 494.
- Brooders**, electric, Oreg. Bul. 262; Wash. Bul. 231.

- Brown rot of tobacco, Conn. State Bul. 311.
- Brown-Swiss cattle. (*See Cattle.*)
- Brucella abortus*, non-virulent strain as vaccine, Mich. Tech. Bul. 98.
- Brucella* spp.—
differentiation, Mich. Tech. Bul. 100.
pathogenicity for fowl, Mich. Tech. Bul. 103.
- Brucella suis*, Ill. Bul. 343.
- Bruchophagus funebris*, Utah Bul. 218.
- Buckwheat, variety tests, W. Va. Bul. 237.
- Bud moth, responses to light, N. Y. State Bul. 583.
- Budding, pecans, Miss. Bul. 275.
- Budgets—
for suggested farming systems, Ky. Bul. 292.
in farm management, Ky. Bul. 312.
- Bulls—
in herd improvement, Idaho Bul. 163. (*See also Sires.*)
- Bunt. (*See Stinking smut.*)
- Butter—
and butter oil, keeping quality, Vt. Bul. 299.
bacteriology, Iowa Res. Bul. 134.
changes of bacterial content during holding, Iowa Res. Bul. 134.
composition and body, N. Y. Cornell Bul. 477.
composition and quality, Oreg. Bul. 258.
consumption, N. J. Bul. 506.
effect of neutralizers and starter cultures on flavor, Ark. Bul. 249.
fat losses in buttermilk, Minn. Bul. 273.
flavor, Ark. Bul. 249; Minn. Tech. Bul. 102.
industry, Oreg. Bul. 258.
keeping quality, Mich. Tech. Bul. 102; Vt. Bul. 299.
metallic flavor, Mich. Tech. Bul. 102.
molds, growth, Minn. Tech. Bul. 64.
off-flavored, microbic flora, Mich. Tech. Bul. 102.
proteolysis by *Streptococcus lactis*, Iowa Res. Bul. 123.
- Butterfat—
buying by creameries, Mo. Res. Bul. 137.
ice cream, testing, Nebr. Bul. 246.
in swine feeding, W. Va. Bul. 230.
new markets for, Mo. Bul. 267.
production, inheritance, Mo. Res. Bul. 144.
production, physical and economic cost, Minn. Bul. 270.
production, relation to body weight, Mo. Res. Bul. 147.
- Buttermilk—
fat losses, Minn. Bul. 273.
from reconstructed skim milk, Mo. Res. Bul. 135.
testing for fat content, Minn. Tech. Bul. 63.
- Butter-oil, keeping quality, Vt. Bul. 299.
- Buying associations, cooperative, Pa. Bul. 242; W. Va. Bul. 241.
- Cabbage—
fertilizer experiments, N. Mex. Bul. 180.
flower formation, Md. Bul. 313.
seed stalk development, N. Y. Cornell 488.
- Cabot-Marshfield area, dairying, Vt. Bul. 304.
- Cacoccia argyrosipila*, N. Y. State Bul. 583.
- Caconema radicolica*. (*See Heterodera radicolica*.)
- Cacti, color schemes, Ariz. [Unnumbered Bul.] 1930.
- Caecum. (*See Cecum.*)
- Cakes, experiments in high altitudes, Colo. Bul. 365, 366.
- Calcareous glade soils. (*See Soils.*)
- Calcium—
and phosphorous effect on clover, Wash. Bul. 243.
and phosphorus, effect on reproduction in rats, Calif. Hilgardia, V. 5, No. 5.
effect on growth of dairy animals, W. Va. Bul. 231.
in zeolitic soils, Ariz. Tech. Bul. 26.
metabolism in hens, Ky. Bul. 291.
- Calcium arsenate on alfalfa hay, feeding value, Utah Bul. 223.
- Calcium carbonate, effect on hatchability, Ky. Bul. 291.
- Calcium cyanide—
as fumigant, N. Y. Cornell Bul. 474.
as fumigant for house fly, S. C. Bul. 256.
- Calcium fluosilicate—
for Mexican bean beetle, S. C. Bul. 258.
for stored-grain insects, Ill. Bul. 359.
- Calcium sulphide, for apple and peach diseases, Va. Tech. Bul. 36.
- Calendra maidis*, S. C. Bul. 257.
- Caliche, formation, Ariz. Bul. 131.
- Calmette-Guérin culture, BCG, vaccination of calves for tuberculosis, Calif. Hilgardia, V. 4, No. 12.
- Calves—
and steers compared, in beef production, Iowa Bul. 271.
dairy, feeding and management, Calif. Bul. 478.
feeding, Md. Bul. 319; Wis. Bul. 404.
milk substitutes, Mass. Bul. 253.
molasses for, Ohio Bul. 463.
self feeders, S. Dak. Bul. 236.
tuberculosis, vaccination with Calmette-Guérin culture, BCG, Calif. Hilgardia, V. 4, No. 12.
value, high-grade and low-grade, W. Va. Bul. 225.
- Calyx injury in apples, Oreg. Bul. 242.
- Camnula pellucida*—
effects of temperature and moisture, Mont. Bul. 223.
feeding habits, Colo. Bul. 354.

Can washer, dairy, Calif. Bul. 466.
 Canada thistle. (*See* Thistles.)
 Cankers. (*See* Blister canker, Perennial canker.)
 Canned vegetables, sulfid spoilage, Iowa Res. Bul. 117.
 Canning factories, tomato, Ark. Bul. 240.
 Canning spinach, studies, Md. Bul. 307.
 Cantaloupe industry, Del. Bul. 165.
 Cantaloupes—
 culture, Mich. Spec. Bul. 193.
 marketing, Del. Bul. 165.
 Carbohydrate metabolism—
 grapes, effect of pruning, Calif. Hilgardia, V. 4, No. 6.
 stipa pulchra, Calif. Hilgardia, V. 5, No. 4.
 Carbon bisulfide, fumigation for centipede, Ind. Bul. 331.
 Carbon dioxide—
 and oxygen, in dormant potato tubers, Calif. Hilgardia, V. 4, No. 11.
 soil, effect of clover and alfalfa, Colo. Bul. 362.
 Carnations, culture and varieties, Ohio Bul. 449.
Carpocapsa pomonella, Wash. Bul. 232.
 Cattle—
 Aberdeen-Angus, beef producing, Ark. Bul. 247.
 abortion. (*See* Abortion in cattle.)
 abortion-free, productivity, Conn. Storrs Bul. 154.
 agglutination and complement fixation test for abortion, Conn. Storrs Bul. 153.
 apparatus for measuring energy requirements, N. H. Bul. 240.
 Ayrshire, development of breed, Mo. Res. Bul. 141.
 beef, corn silage for, Tenn. Bul. 144.
 beef producing, Ark. Bul. 247.
 beef, production and management, Miss. Bul. 268.
 beef, quality of meat, Iowa Bul. 272.
 beef, sweet clover hay for, Minn. Bul. 261.
 blue-gray, inheritance of color and horns, Iowa Res. Bul. 133.
 breeding, Alaska Bul. 8; Idaho Bul. 163; Minn. Bul. 258; Mo. Bul. 274.
 breeds, development, Mo. Bul. 141.
 Brittany and Brown-Swiss, development of breed, Mo. Res. Bul. 141.
 cottonseed meal feeding, N. C. Tech. Bul. 39.
 dairy, abortion, economic aspects, Nebr. Res. Bul. 46.
 dairy, breeding, Mo. Bul. 274.
 dairy, breeding, proved sires. Idaho Bul. 163.
 dairy, breeding records, Minn. Bul. 258.
 dairy, butterfat production cost, Minn. Bul. 270.
 dairy, corn silage feeding, Conn. Storrs Bul. 167, 169.

Cattle—Continued.
 dairy, effect of calcium and phosphorus, W. Va. Bul. 231.
 dairy, feeding, Mo. Bul. 281.
 dairy, irrigated pastures, Oreg. Bul. 264.
 dairy, management, Nev. Bul. 118.
 dairy, minerals for, Mass. Bul. 255; Mich. Tech. Bul. 105; W. Va. Bul. 231.
 dairy. (*See also* Cows, Heifers.)
 energy and nitrogen metabolism, Mo. Res. Bul. 143.
 enterprise, Iowa Bul. 270.
 estrus producing hormone in urine, Mo. Res. Bul. 150.
 fattening on alfalfa, Nebr. Bul. 239.
 feeding, Ind. Bul. 330.
 feeding, sex and age factors in, Nebr. Bul. 252.
 ground grain and roughages for, S. Dak. Bul. 252.
 growth charts, Mo. Res. Bul. 142.
 Holstein, measurements, Mo. Res. Bul. 142.
 Jersey, body weight in relation to milk secretion, Mo. Res. Bul. 147.
 Jersey, measurement, Mo. Res. Bul. 142.
 Jersey, progeny performance, Mo. Res. Bul. 147.
 Lombardy, development of breed, Mo. Res. Bul. 141.
 mammary glands, effect of estrus hormone, Mo. Res. Bul. 145.
 mammary glands, embryonic development, Mo. Res. Bul. 140.
 production, Iowa Bul. 270.
 ranch organization and management, S. Dak. Bul. 255.
 range, digestibility of cottonseed meal, N. Mex. Bul. 178.
 range, growth, Tex. Bul. 409.
 range, supplemental feeding, N. Mex. Bul. 185.
 Shorthorn, development of breed, Mo. Res. Bul. 141.
 (*See also* Baby beef, Bulls, Calves, Cows, Heifers, Sires, Steers.)
 Cauliflower—
 black-rot or blight, N. Y. State Bul. 576.
 premature heading, N. J. Bul. 509.
 Cecal pouches. (*See* Cecum.)
 Cecum—
 obligated, in turkeys, food utilization, Mo. Res. Bul. 136.
 obligation in control of blackhead in turkeys, Mo. Res. Bul. 133.
 Celery—
 blight, Ohio Bul. 461.
 effect of ethylene gas, Mich. Tech. Bul. 104.
 fertilizers, Fla. Bul. 218.
 premature seeding, N. Y. Cornell Bul. 480.

- Celery—Continued.
 quality as related to structure, Ill. Bul. 336.
 yellows, Calif. Hilgardia, V. 3, No. 18.
 Centipede, greenhouse, fumigation, Ind. Bul. 331.
Cercospora apti, Ohio Bul. 461.
- Cereals—
 production under irrigation, Wash. Bul. 240.
 (See also Grain.)
 Ceresan, seed wheat disinfectant, Wash. Bul. 241.
Cerotoma trifurcata, Ark. Bul. 248; S. C. Bul. 265.
Cerosipha rubicola, Minn. Tech. Bul. 61.
 Chalcis fly, on alfalfa, Utah Bul. 218.
- Cheese—
 cheddar, from standardized milk, Idaho Bul. 174.
 consumption, N. J. Bul. 506.
 factories in Wisconsin, Wis. Res. Bul. 100.
 foreign type, industry, Wis. Res. Bul. 103.
 industry, Wis. Res. Bul. 100.
 Chenango County, soil and field-crop management, N. Y. Cornell Bul. 514.
- Cherries—
 chemical and physical changes during ripening, Oreg. Bul. 247.
 culture, Idaho Bul. 171.
 diseases and insects, N. Y. Cornell Bul. 498.
 handling, Oreg. Bul. 247.
 pollination, Mich. Spec. Bul. 188; N. Y. State Bul. 577.
 production, Wash. Bul. 238.
 production and prices, Calif. Bul. 488.
 sour, fruiting, Wis. Bul. 415.
 varieties, N. Y. State Bul. 563; W. Va. Bul. 222.
- Cherry industry, Lewiston orchards, Idaho Bul. 171.
- Cherry preserves, standardization, W. Va. Bul. 234.
- Cherry trees, maintaining productivity, Mich. Spec. Bul. 195.
- Chicken pox. (See Epithelioma.)
- Chickens—
 effect of early handicaps, Calif. Hilgardia, V. 4, No. 1.
 management in confinement, Ohio Bul. 437.
 roup, Wyo. Bul. 172.
- Chicks—
 blood and bone, effect of inadequate ration, Mo. Res. Bul. 124.
 body weight, effect of early handicaps, Calif. Hilgardia, V. 4, No. 1.
 cod-liver oil in feeds, N. Y. Cornell Mem. 126.
 congenital loco, Oreg. Bul. 253.
 deficiency diseases, Mo. Res. Bul. 124.
- Chicks—Continued.
 embryo growth, Mo. Res. Bul. 149.
 feeding, Wash. Pop. Bul. 146; West. Wash. Bul. 15-W.
 rations and weight of internal organs, Mo. Res. Bul. 122.
 yolk absorption, Calif. Hilgardia, V. 4, No. 1; Mo. Res. Bul. 122.
- Children—
 nutritional study, Fla. Bul. 216.
 pre-school, food and hygiene investigations, S. C. Bul. 260.
 school, diet and health, Fla. Bul. 216; S. C. Bul. 268.
 school, food service, Mass. Bul. 263.
- Chinch bug, on St. Augustine grass, Fla. Bul. 209.
- Chlorine content of tobacco, Ky. Bul. 308.
- Choctaw County, tax situation, Miss. Bul. 282.
- Chortophaga viridifaciatus*, Colo. Bul. 354.
- Chrysanthemums, greenhouse culture, Ohio Bul. 439.
- Chrysops* spp., Ark. Bul. 256.
- Churches—
 rural, in community life, Va. Bul. 267.
 rural, negro, Va. Bul. 273.
- Cicadula sexnotata*, in transmission of yellows disease, Calif. Hilgardia, V. 3, No. 18.
- Cider, clarification, N. Y. State Bul. 589.
- Citrus—
 aphid. (See Green citrus aphid.)
 cost of handling, Fla. Bul. 202.
 culture, P. R. Bul. 33.
 packing houses. (See Packing houses.)
 production, Lower Rio Grande Valley, Tex. Bul. 419.
 transportation, Fla. Bul. 217.
 trees, effect of winds, Calif. Bul. 484.
 trees, irrigation water requirements, Calif. Bul. 439.
 world production, Fla. Bul. 217.
 (See also Grapefruit, Oranges.)
- Cladosporium fulvum*, Mass. Bul. 248.
- Clay, colloidal, effect of exchangeable cations, Mo. Res. Bul. 129.
- Cleaners, air. (See Air cleaners.)
- Clear-winged grasshopper, effect of temperature and moisture, Mont. Bul. 223.
- Clearing of land. (See Land clearing.)
- Climate—
 Arizona, Ariz. Bul. 130.
 effect on crop and ranges, N. Mex. Bul. 182.
 effect on nitrogen and organic matter in soils, Mo. Res. Bul. 152.
 Massachusetts, Mass. Bul. 270.
 Ohio, Ohio Bul. 445.
- Clothing—
 coats, studies, S. Dak. Bul. 248.
 cost, farm family, Nebr. Bul. 248.
 management, farm family, Okla. Bul. 197.

Clover—

- and alfalfa in rotation, Colo. Bul. 362. 363, 364.
- culture in the sand hills, Nebr. Bul. 241.
- effect of calcium and phosphorus content of soil, Wash. Bul. 243.
- flower midge, N. Y. Cornell Bul. 481.
- for hay, N. J. Bul. 512.
- leaf caterpillar and leaf tyer, N. Y. Cornell Bul. 489.
- leafhopper, Ky. Bul. 293.

Clubs. (See Boys' and girls' clubs, Community clubs.)

Coats, study of fabric and color, S. Dak. Bul. 248.

Coccaceae, studies, N. Y. State Tech. Bul. 167.

Coccidiosis in fowls, Mo. Bul. 289.

Coccinellidae of Minnesota, Minn. Tech. Bul. 75.

Cockroach, as host of eyeworm of poultry, Fla. Bul. 206.

Cod-liver oil in feeds, N. Y. Cornell Mem. 126.

Coddling moth, spraying, Wash. Bul. 232.

Collar rot, apple trees, Wash. Bul. 236.

Colloidal clay, effect of exchangeable cations, Mo. Res. Bul. 129.

Columbia oats, Mo. Bul. 278.

Combine harvester—

- bulk handling of grain, Idaho Bul. 175.
- in weed-free fields, S. Dak. Bul. 251.
- operation, Mich. Spec. Bul. 198; Mont. Bul. 230.
- operation and effect on crops, Minn. Bul. 256.
- studies, Mo. Bul. 286; N. Dak. Bul. 225; S. Dak. Bul. 244.

Combine harvesting, cost, Minn. Bul. 266.

Combining grain. (See Combine harvester.)

Community clubs, Mont. Bul. 224.

Community halls, Mont. Bul. 221.

Composts, Ga. Bul. 154.

Concrete test cylinders, Colo. Bul. 349.

Congenital loco, chicks, Oreg. Bul. 253.

Conifers—

- on aspen lands, Minn. Tech. Bul. 60.
- Rhizoctonia damping-off, N. Y. Cornell Mem. 124.

Connecticut State agricultural experiment station—

- index to publications, Conn. State Bul. 309.
- report of director, Conn. State Bul. 318.
- report of entomologist, Conn. State Bul. 305, 315.
- report of Tobacco substation, Conn. State Bul. 299, 311.

Connecticut Storrs agricultural experiment station, report, Conn. Storrs Bul. 162.

Connecticut Valley, economic study of agriculture, Conn. Storrs Bul. 165.

Conotrachelus nenuphar, Conn. State Bul. 301; Mass. Bul. 249.

Contacts, in rural community, Mo. Res. Bul. 125.

Contagious abortion. (See Abortion.)

Contagious epithelioma. (See Epithelioma.)

Containers, for starting plants, Pa. Bul. 244.

Cooking fuels in Indiana homes, Ind. Bul. 339.

Cooperation, farmers', N. J. Bul. 487.

Cooperative buying, Pa. Bul. 242; W. Va. Bul. 221.

Cooperative creameries, N. Dak. Bul. 238.

Cooperative livestock shipping associations, Ill. Bul. 331.

Cooperative marketing. (See Marketing.)

Cooperative purchasing associations, Pa. Bul. 242; W. Va. Bul. 221.

Copper—

as supplement to vitamin B in lactation, Ark. Bul. 251.

fungicides, action of spore excretions, N. Y. Cornell Mem. 128.

fungicides, supplements, Mass. Bul. 252.

Copper sulfate, as fungicide, Mass. Bul. 254.

Corn—

acreage, Iowa Bul. 259.

and soybeans, pork production, Miss. Bul. 283.

borer. (See European corn borer.)

breeding, Minn. Bul. 260; S. Dak. Bul. 245.

Canada-Leaming, tests, Conn. State Bul. 310.

diseases, Fla. Bul. 210; Ill. Bul. 354.

double-crossed, Minn. Bul. 260.

ear and kernel characters, relation to yield, Iowa Bul. 257.

earworm, hibernation, Va. Tech. Bul. 40.

earworm, injury, relation to shuck characters, S. C. Bul. 266.

effect of legumes on yield, Tenn. Bul. 142.

effect of sulfur, Tex. Bul. 408.

enterprise, Iowa Bul. 259.

farms, corn-belt, organization, Ill. Bul. 329.

fertilizer tests, La. Bul. 210.

for fattening lambs, Okla. Bul. 196.

four-lined borer on, Iowa Res. Bul. 125.

hogging off, Mich. Spec. Bul. 200.

inheritance of germless seed, Iowa Res. Bul. 121.

insect injury, relation to shuck quality, S. C. Bul. 266.

maize billbug, S. C. Bul. 257.

meal, for cows, digestibility trials, Va. Tech. Bul. 38.

Corn—Continued.

- Mendelian asynapsis, N. Y. Cornell Mem. 129.
 planting date, Colo. Bul. 369.
 production, Iowa Bul. 259.
 Reid Yellow Dent, Iowa Bul. 257.
 rootworm. (*See* Southern corn rootworm.)
 seed treatment and seedling blight, Iowa Res. Bul. 124.
 selfed strains, S. Dak. Bul. 245.
 shuck characters, relation to insect injury, S. C. Bul. 266.
 silage. (*See* Silage, corn.)
 soft, for swine, Iowa Bul. 273.
 stored, protection against insects, Ill. Bul. 359.
 varieties, La. Bul. 210; Tex. Bul. 397.
 varieties and strains, high yielding, Iowa Bul. 265.
 varieties, compared with Canada-Leaming, Conn. State Bul. 310.
 variety tests, La. Bul. 210.
 virescent seedlings, inheritance, N. Y. Cornell Mem. 125.
 Cornstalks, for industrial uses, Iowa Bul. 274.
Corticium vagum, Fla. Bul. 220.
 Cost and profit, maple sugar, Vt. Bul. 292.
 Cost of canning, prunes, Oreg. Bul. 263.
 Cost of clothing, farm families, Nebr. Bul. 248.
 Cost of combine harvesting, Minn. Bul. 266.
 Cost of cooling milk, Conn. Storrs Bul. 170; R. I. Bul. 223.
 Cost of development, apple orchards, Ohio Bul. 456.
 Cost of farm credit, N. C. Bul. 270.
 Cost of government, Colo. Bul. 361; Mass. Bul. 256; N. Y. Cornell Bul. 484.
 Cost of feeding turkeys, Pa. Bul. 250.
 Cost of handling—
 citrus fruit, Fla. Bul. 202.
 milk, N. Y. Cornell Bul. 473.
 milk, at receiving stations, Vt. Bul. 303.
 Cost of horse labor, Oreg. Bul. 250.
 Cost of living, Laurel County, Ky. Bul. 301.
 Cost of marketing—
 apples, Wash. Bul. 242.
 livestock, truck and rail, Ill. Bul. 342.
 Cost of operation—
 feed stores, N. Y. Cornell Bul. 505.
 grain stores, N. H. Bul. 251.
 tractors, N. Y. Cornell Bul. 506.
 Cost of production—
 agricultural products, dry-land farms, N. Mex. Bul. 187.
 alfalfa hay, Nev. Bul. 117.
 apples, Ark. Bul. 236; Ohio Bul. 435; Wash. Bul. 239.
 apricots, Wash. Bul. 238.
 cherries, Wash. Bul. 238.
 crops on irrigated farms, Colo. Bul. 353.

Cost of production—Continued.

- field crops, Iowa Bul. 261; Ohio Bul. 453.
 grapes, Mo. Bul. 273.
 hay, Oreg. Bul. 248.
 kale, Oreg. Bul. 251.
 milk, N. Y. Cornell Bul. 483.
 peaches, Wash. Bul. 238.
 pears, Oreg. Bul. 267; Wash. Bul. 238.
 peas and sweet corn, Md. Bul. 305.
 potatoes, N. H. Bul. 239.
 route, Jones County, Miss. Bul. 269.
 silage, Oreg. Bul. 251.
 strawberries, Md. Bul. 315; Oreg. Bul. 245.
 tomatoes, Md. Bul. 304.
 Cost of raising dairy cows, W. Va. Bul. 224.
 Cost of raising pigs, N. C. Bul. 272.
 Cost of refrigeration, milk, R. I. Bul. 223.
 Cost of tractor logging, Calif. Bul. 474.
 Cost of transportation, citrus, Fla. Bul. 217.
 Cost reductions in dry farming, Utah Bul. 215.
 Costs—
 horses and farm equipment, Iowa Bul. 264.
 in tomato canning factories, Ark. Bul. 240.
 Cotton—
 biometrical analysis, Okla. Bul. 187.
 boll weevil. (*See* Boll weevil.)
 breeding, Ark. Bul. 243; Miss. Tech. Bul. 18.
 culture, Ga. Bul. 152.
 diseases, Fla. Bul. 214.
 effect of blooming on fruit set and yield, Ark. Bul. 253.
 effect of sulfur, Tex. Bul. 408.
 experiments, Ariz. Bul. 135; Miss. Bul. 271, 272, 274, 285, 286, 287.
 farmers, credit problems, Ga. Bul. 153; Okla. Bul. 198.
 farms, management, Ark. Bul. 235.
 fertilizer and rotation experiments, S. C. Bul. 262.
 fertilizer experiments, Ala. Bul. 228; Ariz. Bul. 129; Ark. Bul. 255; Ga. Bul. 152.
 fiber lengths, inheritance, Ark. Bul. 243.
 fiber, studies, Ga. Bul. 158.
 fruiting habits, S. C. Bul. 261.
 ginning methods, Tex. Bul. 416.
 grade and staple length, Ga. Bul. 157.
 growers association, relation to economic condition of farmer, Okla. Bul. 186.
 inheritance, fiber lengths, Ark. Bul. 243.
 inheritance, lint percentage, Miss. Tech. Bul. 18.
 marketing, cooperative, Ark. Bul. 245.
 pooling, Ark. Bul. 245.

Cotton—Continued.

prices, related to quality, Ga. Bul. 165.
red plant color and leaf shape, Ark.
Bul. 243.

root rot, Tex. Bul. 393.

spacing, Ark. Bul. 253.

square borer, life history, Tex. Bul. 401.

synthetic nitrogen and concentrated
fertilizers, N. C. Bul. 266.

varieties, La. Bul. 207; N. Mex. Bul.

181; Tex. Bul. 399, 406, 417.

varieties, summary, Miss. Bul. 288.

variety tests, La. Bul. 207; Tex. Bul.
399, 406, 417.

wilt, effect of soil factors, Ark. Bul.
234.

wilt, potash in relation to, Fla. Bul.
213.

Cottonseed—

cake, for range cattle, N. Mex. Bul.
185.

composition, N. Mex. Bul. 175.

delinting, Fla. Bul. 214.

Cottonseed meal—

and hulls, analyses for gossypol, N.
Mex. Bul. 179.

and tankage, for egg production, N.
Mex. Bul. 183.

as feed for hogs, Tex. Bul. 410.

cattle feeding, Ind. Bul. 330; N. C.
Tech. Bul. 39.

digestibility, range cattle, N. Mex. Bul.
178.

effect on cattle, N. C. Tech. Bul. 39.

fertilizer on tomato, Miss. Bul. 273.

pig feeding, Nebr. Bul. 243.

steer feeding, Ala. Bul. 231.

with roughages, for lambs, N. Mex.
Bul. 179.

Country and town, service relationships,
Okla. Bul. 194.

Country life. (*See* Churches, Education,
Government, Libraries, Population, Rural
community, Rural organizations, Service
agencies, Standard of living, Trade
centers.)

County boards, cost of maintenance, N. Y.
Cornell Bul. 484.

Cowpeas, effect of sulfur, Tex. Bul. 408.

Cows—

beef, deferred breeding, Oreg. Bul. 271.

dairy, cost of raising, W. Va. Bul. 224.

dairy, dicalcium phosphate for, Ohio
Bul. 455.

dairy, feeding, Nev. Bul. 116, 119;
Wis. Bul. 417.

dairy, feeding rubber seed meal, Va.
Tech. Bul. 41.

dairy, soybean hay for, Md. Bul. 316.

digestibility trials with corn meal, Va.
Tech. Bul. 38.

feeding, corn vs. sorghum silage, S. C.
Bul. 254.

feeding ground hay, S. C. Bul. 255.

Cows—Continued.

feeding kale and corn silage, Oreg.
Bul. 272.

mastitis, studies, Conn. Storrs Bul.
158.

rations, methods of calculating, Nev.
Bul. 116.

(*See also* Heifers.)

Crab apples, varieties, Ohio Bul. 434.

Cranberries—

chemical study, Mass. Bul. 265.

coloring with ethylene, N. J. Bul. 504.

culture, Wash. Bul. 230.

fertilizers, N. J. Bul. 501.

Cranberry false blossom and blunt-nosed
leafhopper, N. J. Bul. 491.

Cranberry land, effect of fertilizers, N. J.
Bul. 501.

Cream—

buying by creameries, Mo. Res. Bul.
137.

feathering, Ill. Bul. 352.

frozen, metallic flavor, Vt. Bul. 299.

homogenized, heat coagulation, Ill.
Bul. 352.

keeping quality, Vt. Bul. 299.

layer on market milk, W. Va. Bul. 229.

microscopic appearance, N. Y. State
Bul. 566.

on raw and pasteurized milk, N. Y.
State Tech. Bul. 157.

stations, N. Dak. Bul. 238.

Creameries—

cooperative, N. Dak. Bul. 238.

cream procurement, Mo. Res. Bul. 137.

inspection, N. J. Bul. 508.

organization and construction, Iowa
Bul. 267.

studies, Mo. Bul. 267.

Creaming of milk. (*See* Milk, creaming.)

Credit. (*See* Agricultural credit.)

Cresylic acid, in stored grain insect con-
trol, Ill. Bul. 359.

Cristulariella depraedans, Conn. State Bul.
316.

Cronartium ribicola, Conn. State Bul. 314.

Crop rotations—

alfalfa in, Colo. Bul. 362, 363, 364;
Minn. Bul. 265.

and fertilizer experiments, R. I. Bul.
224; S. C. Bul. 262.

Cecil sandy clay loam, Ga. Bul. 151.

clover and alfalfa, Colo. Bul. 362, 363,
364.

effect on tobacco, Wis. Bul. 412.

Hopkinsville experiment field, Ky. Bul.
299.

legumes as nitrogen source, N. Y.
Cornell Bul. 500.

lysimeter experiments, N. Y. Cornell
Mem. 134; N. Y. State Tech. Bul.
166.

nitrogen and water relations, lysime-
ter experiments, N. Y. State Tech.
Bul. 166.

Crop yields—

and soil moisture, Okla. Bul. 190, 192.
soil experiment fields, Ill. Bul. 327,
347.

Vivian farm, S. Dak. Bul. 253.

Cropping systems. (*See* Farm management.)

Crops—

and prices, Calif. Bul. 473, 487, 488,
502.

effect of weather, N. Mex. Bul. 182.

production at Tucumcari field station,
N. Mex. Bul. 176.

(*See also* Field crops, Truck crops.)

Cryolite as insecticide, Tenn. Bul. 140.

Cryptorchidism in goats, Tex. Bul. 407.

Cucumber beetles, N. Y. State Tech. Bul.
148.

Cucumbers—

angular leaf spot and fruit rot, Fla.
Bul. 207.

diseases, Fla. Bul. 208.

Geneva, developing fruit without pol-
lination, N. Y. State Bul. 580.

Cucurbits, breeding, species, and varietal
crosses, Iowa Bul. 263.

Cultivation, berries, West. Wash. Bul.
16-W.

Curly dwarf, potato, Nebr. Res. Bul. 47.

Curly top—

breeding resistant beets, Calif. Hil-
gardia, V. 4, No. 14.

host plants, Calif. Hilgardia, V. 3,
No. 20.

of sugar beets, Calif. Bul. 465.

Curry and Roosevelt Counties, economic
study of farms, N. Mex. Bul. 186.

Cut-over lands, alfalfa on, Idaho Bul. 169.

Cutworm, pale western, Mont. Bul. 225.

Cyanide products, fumigation, N. Y. Cornell
Bul. 474.

Dairy cooler—

mechanical, Nebr. Bul. 249.

(*See also* Milk, cooling.)

Dairy herd. (*See* Cattle, dairy.)

Dairy farm management, Nev. Bul. 118;
Va. Bul. 272

Dairy farm regions, studies, Vt. Bul. 307.

Dairy farming. (*See* Dairying.)

Dairy farms, practices, R. I. Bul. 219.

Dairy plants—

can washer, Calif. Bul. 466.

use of exhaust steam, Wis. Bul. 411.

Dairy products—

consumption, N. J. Bul. 506.

consumption, Philadelphia, Pa. Bul.
245.

cooperative marketing, N. Dak. Bul.
238.

stored, keeping qualities, Vt. Bul. 299.

(*See also* Butter, Buttermilk, Cheese,
Cream, Ice cream, Milk.)

Dairy rations, methods of calculating, Nev.
Bul. 116.

Dairy utensils, sterilization, Calif. Bul.
468.

Dairying—

Cabot-Marshfield area, Vt. Bul. 304.

economic studies, Mo. Bul. 267; N. Y.
Cornell Bul. 483.

efficiency in, Nev. Bul. 118.

Vermont, Vt. Bul. 304, 307.

(*See also* Farm management, dairy,
Milk, production.)

Damping-off—

conifers, N. Y. Cornell Mem. 124.

tomatoes, N. Y. State Bul. 586.

Dams, construction, for gullies, Mo. Bul.
271.

Dasyneura leguminicola, N. Y. Cornell Bul.
481.

Dehydration, raisins, Calif. Bul. 500.

Delaware agricultural experiment station,
report, Del. Bul. 162, 167.

Derris powder, in control of ox warble flies,
Va. Tech. Bul. 39.

Dewberries, Mo. Bul. 265.

Diabrotica duodecimpunctata, Ala. Bul. 230;
Ark. Bul. 232.

Diabrotica spp., N. Y. State Tech. Bul. 148.

Dicalcium phosphate, for dairy cows, Ohio
Bul. 455.

Diet—

farm families, Mo. Res. Bul. 148; Wyo.
Bul. 165.

school children, relation to health, S. C.
Bul. 268.

Dietary requirements for fertility and lac-
tation, Ark. Bul. 250, 251, 252.

Dietary studies, farm families, Wyo. Bul.
165.

Dietary studies. (*See also* Food.)

Digestibility experiments—

cottonseed meal, N. Mex. Bul. 178.

feeding stuffs, Tex. Bul. 402.

nitrogen-free extract of feeds, sheep,
Tex. Bul. 418.

Diplodia zeae, infection studies, Iowa Res.
Bul. 124.

"Dixie" section, Washington County, eco-
nomic survey, Utah Bul. 214.

Douglas fir. (*See* Fir.)

Drainage—

and ground water, Middle Rio Grande
Valley, N. Mex. Bul. 184.

of swamps, and forest growth, Wis.
Res. Bul. 89.

rice fields, Calif. Bul. 464.

Drug products, analyses and inspection,
Conn. State Bul. 307, 319.

Dry farming—

cost reduction, Utah Bul. 215.

experiments, Utah Bul. 222.

Dry land farms, economic studies, N. Mex.
Bul. 186, 187.

Dry land shelter belts, Mont. Bul. 233, 235.

Dryden, New York, historical development,
N. Y. Cornell Bul. 504.

Drying fruit, Calif. Bul. 485.

Drymaria pachyphylla, poisoning of live-
stock, N. Mex. Bul. 173.

Dusting. (*See* Spraying and dusting.)

- Dusts, for testing air cleaners, Calif. Hilgardia, V. 5, No. 2.
- Early blight of celery, Ohio Bul. 461.
- Edgeley substation, report, N. Dak. Bul. 226.
- Education—
 high school, farm boys and girls, S. Dak. Bul. 250.
 public, cost, Colo. Bul. 368.
- Edwards Plateau grazing area, ranch management, Tex. Bul. 413.
- Egg weight—
 and body weight of fowl, W. Va. Bul. 233.
 inheritance, R. I. Bul. 218.
- Eggs—
 developing, biochemistry and biophysics, N. Y. Cornell Mem. 132.
 developing, effect of humidity, N. Y. Cornell Mem. 132.
 effect of pimiento feeding, Ga. Bul. 160.
 graded, for market, Ind. Bul. 334.
 incubation, high altitudes, Wyo. Bul. 169.
 marketing, S. Dak. Bul. 243.
 number and weight, relationship between body weight of fowls, W. Va. Bul. 233.
 production, cottonseed meal and tankage for, N. Mex. Bul. 183.
 production, effect of date of first egg, Iowa Res. Bul. 128.
 production, effect of inbreeding, Mass. Bul. 258.
 production, effect of maturity, Iowa Res. Bul. 119.
 production, effect of molting, Mass. Bul. 264; N. Y. Cornell Bul. 503.
 production, effect of protein concentrates, Mo. Bul. 288.
 production, effect of vitamin D supplements, Ky. Bul. 304.
 production, time factor, W. Va. Bul. 223.
 production, winter, and poultry houses, Nebr. Bul. 247.
 storage studies, N. Mex. Bul. 177.
 studies in *Salmonella pullora* infection, N. C. Tech. Bul. 36.
- Elmeria avium*, Mo. Bul. 289.
- Electric brine cooler vs. ice, for milk, Vt. Bul. 300.
- Electric brooders, Oreg. Bul. 262.
- Electric hay hoists, Oreg. Bul. 255.
- Electric incubation and brooding, Wash. Bul. 231.
- Electric motors, farm use, Pa. [Unnumbered Pub.] 1929.
- Electric plants, farm, types, Nebr. Bul. 235.
- Electricity—
 in Ontario and Quebec, Canada, economic study, N. Y. Cornell Bul. 496.
 on farms, Ill. Bul. 332; Minn. Bul. 262; Mo. Bul. 268.
 on farms, costs and uses, S. Dak. Bul. 239.
- Electricity—Continued.
 on farms, economic study, N. Y. Cornell Bul. 496.
 refrigeration, household, N. H. Bul. 244.
 refrigeration, household, cost, S. Dak. Bul. 241.
 refrigeration, milk, Conn. Storrs Bul. 170; N. Y. State Bul. 581.
 rural service, Nebr. Bul. 236.
- Electro-dialysis, soils, Del. Bul. 166.
- Elevators—
 farmers', investigations, Mont. Bul. 226.
 organization, economic, Minn. Bul. 251.
- Empoasca fabae*, Ky. Bul. 293.
- Ensilage. (See Silage.)
- Enterio-hepatitis, Mo. Res. Bul. 133.
- Entomologist, report, Conn. State Bul. 205, 315; Mont. Bul. 238.
- Entomophagous insects, mass production, Calif. Hilgardia, V. 4, No. 16.
- Epilachna corrupta*, Mass. Bul. 261; S. C. Bul. 258.
- Epithelioma—
 control, Idaho Bul. 168.
 cutaneous vaccine, Mass. Bul. 257.
 vaccination for, West. Wash. Bul. 12-W.
 vaccination methods, Oreg. Bul. 273.
- Epitrix fuscata* and *E. cucumeris*, Ky. Bul. 297.
- Eriophyidae, of New York, N. Y. State Tech. Bul. 163.
- Eriosoma lanigerum*, Ohio Bul. 464; Oreg. Bul. 243.
- Erosion, soil. (See Soil erosion.)
- Estrus producing hormone. (See Hormone.)
- Ethylene gas—
 effect on vegetables and fruit, Mich. Tech. Bul. 104.
 for coloring cranberries, N. J. Bul. 504.
- Eucosma ocellana*. (See *Spilonota ocellana*.)
- European corn borer, agronomic investigations, Mich. Spec. Bul. 204.
- Euscelis striatulus*, N. J. Bul. 491.
- Eutettix tenella*, Utah Bul. 212.
- Evergreens, South Dakota, S. Dak. Bul. 254.
- Ewes, aged, lambs from, Nebr. Bul. 250.
- Expenditures—
 clothing, Nebr. Bul. 248.
 farm and city families, Minn. Bul. 255.
 farm family, Idaho Bul. 165.
 farm homes, Vt. Bul. 294.
 village and town families, Minn. Bul. 253; N. Y. Cornell Bul. 502.
- Experiment fields—
 Hopkinsville, Ky. Bul. 299.
 Illinois, crop yields, Ill. Bul. 327, 347.
- Eyeworm, Manson's, of poultry, Fla. Bul. 206.
- Fallow, effect on wheat, Mont. Bul. 222.
- Families—
 consumption of dairy products, Pa. Bul. 245.

Families—Continued.

- farm and city, incomes and expenditures, Minn. Bul. 255.
- farm, and rural organization, Wis. Res. Bul. 96.
- farm and village, food consumption and cost, N. Y. Cornell Bul. 502.
- farm, cost of clothing, Nebr. Bul. 248.
- farm, diet, Mo. Res. Bul. 148; Wyo. Bul. 165.
- farm, economic and social study, Mo. Res. Bul. 148.
- farm, effect of land speculation on, Ky. Bul. 300.
- farm, expenditures, Minn. Bul. 255; N. C. Bul. 269; Tech. Bul. 37; Ohio Bul. 468; Vt. Bul. 294.
- farm, food consumption, Ohio Bul. 433.
- farm, food habits, Utah Bul. 213.
- farm, income and farm management, Ky. Bul. 305.
- farm, incomes and expenditures, Minn. Bul. 255.
- farm, living conditions, Wake County, N. C. Bul. 269; Tech. Bul. 37.
- food habits and expenditures, Idaho Bul. 165.
- village and town, income and expenditures, Minn. Bul. 253.
- Far East, shipment of fruit and vegetables to, Calif. Bul. 497.
- Farm buildings, economic study, N. Y. Cornell Bul. 478.
- Farm business studies, S. C. Bul. 264.
- Farm credit. (*See* Agricultural credit.)
- Farm equipment, in farm management studies, Iowa Bul. 264.
- Farm family. (*See* Families.)
- Farm homemakers. (*See* Women on farms.)
- Farm homes—
 - expenditures, study, Vt. Bul. 294.
 - kerosene stoves in, Nebr. Res. Bul. 48.
 - refrigeration, electric, N. H. Bul. 244; S. Dak. Bul. 241.
 - sewage disposal, Nebr. Bul. 245.
 - sewing center, N. Y. Cornell Bul. 492.
 - time studies. (*See* Time studies.)
 - water carried, Nebr. Bul. 234.
 - water supply, Nebr. Bul. 245.
 - (*See also* Families.)
- Farm land, prices, Calif. Hilgardia, V. 3, No. 17.
- Farm leases. (*See* Leases.)
- Farm living. (*See* Country life.)
- Farm machinery. (*See* Machinery.)
- Farm management—
 - and incomes, Laurel County, Ky. Bul. 305.
 - Billings beet region, Mont. Bul. 232.
 - Black Waxey Prairie Belt, Tex. Bul. 395.
 - budget in, Ky. Bul. 292, 312.
 - cotton farms, Faulkner County, Ark. Bul. 235.

Farm management—Continued.

- cropping systems, Iowa Bul. 261, 268.
- dairying, Nev. Bul. 118; R. I. Bul. 219; Va. Bul. 272.
- dry land, N. Mex. Bul. 186, 187.
- eastern Washington and northern Idaho, Idaho Bul. 173; Wash. Bul. 244.
- horses and tractors in, Iowa Bul. 264.
- Indiana, Ind. Bul. 342.
- Iowa, Iowa Bul. 256, 261.
- Kansas, Kans. Bul. 251.
- livestock, Iowa Bul. 270.
- Michigan, Mich. Spec. Bul. 206.
- Minnesota, Minn. Bul. 257, 268.
- Nebraska, Nebr. Bul. 244.
- Piedmont, S. C. Bul. 264.
- Purchase region, Ky. Bul. 292.
- rice farms, La. Bul. 217.
- south central Mississippi, suggested changes, Miss. Bul. 276.
- South Dakota, S. Dak. Bul. 238.
- study, Mich. Spec. Bul. 187.
- suggested systems, S. Dak. Bul. 249.
- Texas, Tex. Bul. 395.
- types of farming. (*See* Farms, types.)
- upland sections, Ark. Bul. 235.
- western Montana, Mont. Bul. 239.
- Wyoming County, Pa. Bul. 257.
- Yates County, N. Y. Cornell Bul. 482.
- (*See also* Farm organization.)
- Farm migration. (*See* Migration.)
- Farm organization—
 - corn belt, Ill. Bul. 329.
 - relation of farm power, Ind. Bul. 332.
 - sugar cane farms, La. Bul. 215.
 - tobacco farms, Conn. Storrs Bul. 165.
 - upland sections, Ark. Bul. 235.
 - (*See also* Farm management.)
- Farm power—
 - and labor, Pa. Bul. 238.
 - relation to organization, Ind. Bul. 332.
 - sources, Minn. Bul. 262.
 - utilization, sugar farms, La. Bul. 215.
- Farm practices. (*See* Farm management.)
- Farm products. (*See* Agricultural products.)
- Farm real estate. (*See* Real estate.)
- Farm shop, plans and equipment, Wash. Pop. Bul. 147.
- Farm survey, marginal land, N. Y. Cornell Bul. 476.
- Farm tenancy. (*See* Land tenure.)
- Farm trade centers. (*See* Trade centers, farm.)
- Farm woodlands. (*See* Woodlands, farm.)
- Farmers—
 - advancement, and organization membership, Okla. Bul. 185.
 - cooperative purchasing associations. (*See* Cooperative purchasing associations.)

Farmers—Continued.

- cotton, credit. Ga. Bul. 153; Okla. Bul. 198.
- cropper, credit problems, N. C. Bul. 271.
- economic conditions as related to Oklahoma cotton growers association, Okla. Bul. 186.
- living conditions, N. C. Tech. Bul. 37.
- markets. (See Farm markets.)
- mobility, Okla. Bul. 195.

Farming—

- occupations, genesis, Conn. Storrs Bul. 161.
- part-time, Mass. Bul. 266.
- systems. (See Farm management.)
- types. (See Farms, types.)

Farms—

- abandoned. New York, study, N. Y. Cornell Bul. 490.
- business analysis, Mich. Spec. Bul. 187.
- dairy. (See Dairy farms.)
- economic adjustments, S. Dak. Bul. 249.
- economic study, Curry and Roosevelt Counties, N. Mex. Bul. 186.
- foreclosed, management, Mo. Bul. 269.
- livestock, share renting, Va. Bul. 271.
- management. (See Farm management.)
- organization. (See Farm organization.)
- rice, economic problems, La. Bul. 217.
- rice, irrigation systems, La. Bul. 216.
- rice, tractors and trucks on, La. Bul. 218.
- sugar cane, organization and power utilization, La. Bul. 215.
- taxation. (See Taxation.)
- types, Conn. Storrs Bul. 161; Ind. Bul. 342; Iowa Bul. 256, 268; Kans. Bul. 251; Mich. Spec. Bul. 206; Minn. Bul. 257; Nebr. Bul. 244; S. Dak. Bul. 238.
- (See also Farm management.)

Fasciola hepatica, Oreg. Bul. 266.

Fascioliasis, in sheep and goats, Oreg. Bul. 266.

Fat globules, in milk, statistical study, Mo. Res. Bul. 130.

Feathers. (See Plumage.)

Feed—

- grinding, electric motor, Pa. [Un-numbered Pub.] 1929.
- steaming for livestock, Wis. Res. Bul. 102.
- stores, retail, cost of operation, N. Y. Cornell Bul. 505.

Feeding standards, swine, Iowa Res. Bul. 118.

Feeding stuffs—

- analyses and inspection, Conn. State Bul. 303, 317; Ky. Bul. 295, 310; N. H. Bul. 245, 253; N. J. Bul. 488, 505; Tex. Bul. 404, 420; Vt. Bul. 293, 305, 309, 321, 324.

Feeding stuffs—Continued.

- energy-production coefficients, Tex. Bul. 402.
- minerals in, Mass. Bul. 255.
- registrations, N. J. Bul. 488, 505.
- Fermented reconstructed milk. (See Milk, fermented.)
- Fertility in animals, dietary requirements, Ark. Bul. 250, 251, 252.
- Fertilizer control, Vt. Bul. 323.
- Fertilizer ratio experiments, Ga. Bul. 151.
- Fertilizers—

- analyses and inspection, Conn. State Bul. 308, 321; Ky. Bul. 298, 313; Mo. Bul. 270, 276, 284, 292; N. H. Bul. 237, 248, 254; N. J. Bul. 482, 490, 493, 495, 514; S. C. Bul. 259, 267; Tex. Bul. 403, 415; Vt. Bul. 301, 320, 323.
- and crop rotation, R. I. Bul. 224; S. C. Bul. 262.
- and manure in vegetable production, Md. Bul. 309.
- apple orchards, N. Y. State Bul. 574.
- asparagus, Md. Bul. 314.
- cabbage, N. Mex. Bul. 180.
- concentrated, on cotton and sweet potatoes, N. C. Bul. 266.
- cotton, Ala. Bul. 228; Ariz. Bul. 129; Ark. Bul. 255; Ga. Bul. 152.
- cranberries, N. J. Bul. 501.
- effect on sugar beet, Mich. Tech. Bul. 108.
- field experiments, Iowa Bul. 269.
- lysimeter experiments, N. Y. Cornell Mem. 134.
- nitrogen, for tomatoes, Miss. Bul. 273.
- on Illinois soils, Ill. Bul. 362.
- on Red Prairie soil, Okla. Bul. 188, 189.
- pastures, Wis. Bul. 414.
- peaches, Ark. Bul. 239.
- potato, Me. Bul. 350, 354.
- registration, Mo. Bul. 284; N. J. Bul. 482, 495.
- rice, Tex. Bul. 398.
- rotation experiments, S. C. Bul. 262.
- strawberries, Ohio Bul. 466.
- sugar beets, Mich. Spec. Bul. 205.
- sugar cane, La. Bul. 203.
- sweet potatoes, Md. Bul. 311.
- testing, Mo. Bul. 270, 276.
- tobacco, Va. Tech. Bul. 35; Wis. Bul. 413.
- truck crops, Fla. Bul. 218; Ill. Bul. 319.
- vegetables, Ill. Bul. 346; Md. Bul. 309.
- Fibers—
- cotton, Ark. Bul. 243; Ga. Bul. 158.
- wool, Calif. Hilgardia, V. 3, No. 19; V. 4, No. 5.
- Field crops—
- cost of production, Ohio Bul. 453.
- dry farm experiments, Utah Bul. 222.
- experiments, Kans. Bul. 250.
- experiments, Hopkinsville experiment field, Ky. Bul. 299.

Field crops—Continued.

management, Yates County, N. Y. Cornell Bul. 482, 514.

production and cost, Iowa Bul. 261.

Figs, freezing for preservation, Ga. Bul. 164.

Filberts, culture, N. Y. State Bul. 588.

Fir, Douglas, yield, stand, and volume tables, Calif. Bul. 491.

Fire blight—

overwintering, Mich. Tech. Bul. 97.

overwintering and dissemination, Ark. Bul. 244.

Fires. (See Forest fires.)

Fish meal, cattle feeding, Ohio Bul. 446.

Flathead irrigation project, analysis of production, Mont. Bul. 237.

Flea-beetles, on potato, Ky. Bul. 297.

Fleeces, macroscopical analysis, Calif. Hilgardia, V. 3, No. 19.

Flies. (See Chalcis fly, Horse-flies, House flies, Ox warble fly.)

Flour—

baking experiments at high altitudes, Colo. Bul. 365.

baking tests, Ariz. Tech. Bul. 27.

Wyoming, bread from, Wyo. Bul. 162.

Flowers. (See Asters, Carnations, Chrysanthemums, Gladioli, Narcissus, Ornamental plants, Roses, Violets.)

Flukes, in sheep and goats, Oreg. Bul. 266.

Flynt Building, opening, Ga. Bul. 156.

Food—

and drug products, analyses and inspection, Conn. State Bul. 307, 319.

children, Fla. Bul. 216; Mass. Bul. 263; S. C. Bul. 260, 268.

college community, energy and protein content, N. H. Bul. 242.

consumption and cost, N. Y. Cornell Bul. 502.

consumption and expenditures, Idaho Bul. 165.

consumption, farm family, Ohio Bul. 433.

diet of farm families, Mo. Res. Bul. 148; Wyo. Bul. 165.

diet of school children, S. C. Bul. 268.

habits, pre-school children, S. C. Bul. 260.

habits, rural people, Ga. Bul. 159.

habits, Utah families, Utah Bul. 213.

infant. (See Infant foods.)

service, schools, Mass. Bul. 263.

survey, Lansing, Mich. Tech. Bul. 107.

(See also Nutrition.)

Forage crops for swine, Pa. Bul. 254.

Forest fires, Wis. Res. Bul. 91.

Forest trees. (See Trees, forest.)

Forestry—

conversion of aspen lands to conifers, Minn. Tech. Bul. 60.

in Lincoln County, Wis. Bul. 406.

Forests—

growth, and drainage of swamps, Wis. Res. Bul. 89.

Forests—Continued.

natural reproduction, Vt. Bul. 311.

oak, Mich. Spec. Bul. 190.

(See also Trees.)

Formaldehyde, for potato scab and Rhizoctonia, Nebr. Res. Bul. 44.

Foulbrood, American, sterilization of brood combs, Wyo. Bul. 166.

4-H clubs, effect on school work, Va. Bul. 274.

Four-lined borer on corn, Iowa Res. Bul. 125.

Fowl pox. (See Epithelioma).

Freezing—

effect on catalase activity in apples, N. Y. Cornell Mem. 122.

figs, for preservation, Ga. Bul. 164.

peaches, for preservation, Ga. Bul. 163.

Frost, resistance of peach buds, W. Va. Bul. 236.

Fructose, fermentation in spoiled tomato products, N. Y. State Tech. Bul. 151.

Fruit—

and truck experiment station, Louisiana, report, La. Bul. 206.

and vegetables, shipping to Far East, Calif. Bul. 497.

and vegetables, storage, Pa. Bul. 241.

and vegetables, trucks as carriers, N. J. Bul. 503.

breeding, S. Dak. Bul. 237.

distribution in terminal markets, N. Y. Cornell Bul. 494.

drying, Calif. Bul. 485.

effect of ethylene gas, Mich. Tech. Bul. 104.

handling and packing, Ill. Bul. 350.

industry, economic aspects, Wash. Bul. 238.

jelly. (See Jelly.)

juice. (See Apple juice.)

keeping quality, in transit, Ill. Bul. 350.

marketing, Utah Bul. 214.

marketing, cooperative, Mo. Bul. 277.

markets in Asia, Calif. Bul. 493.

new or noteworthy, N. Y. State Bul. 578.

pollination, Mich. Spec. Bul. 188; Mo. Bul. 283; N. Y. State Bul. 577.

pollination, effect on set of fruit, N. Y. Cornell Bul. 497.

precooling, Calif. Bul. 496.

preservation by freezing, Ga. Bul. 163, 164.

production, Utah Bul. 214.

refrigeration in transit, Ill. Bul. 334.

regions, N. Y. State Bul. 563.

rot, cucumbers, Fla. Bul. 207.

rot, peppers, Ga. Bul. 162.

seedling stocks, N. Y. State Bul. 569.

setting, N. Y. Cornell Bul. 497.

storage, insulation, Pa. Bul. 241.

transpiration rates, comparison, Ill. Bul. 341.

Fruit—Continued.

- tree leaf roller, responses to light, N. Y. State Bul. 583.
- trees, transpiration, effect of hydrocarbon oils, Ill. Bul. 353.
- varieties, N. Y. State Bul. 563, 578; Ohio Bul. 434; W. Va. Bul. 222.
- washing, to remove spray residue, N. Y. State Bul. 575.

Fuels, for cooking, Ind. Bul. 339.

Fumigation, with nicotine and cyanide products, N. Y. Cornell Bul. 474.

Fungi, film-forming, on brines and liquors, Calif. Hilgardia, V. 4, No. 9.

Fungicides—

- analyses and inspection, N. J. Bul. 485, 513.
- composition, Conn. State Bul. 300.
- copper sulfate as, Mass. Bul. 254.
- copper, supplements, Mass. Bul. 252.
- protective, testing in laboratory, N. Y. Cornell Mem. 128.
- studies, N. Y. Cornell Mem. 128.

Fusarial head blight of wheat. (See Wheat scab.)

Fusarium batatas, N. C. Bul. 273; N. C. Tech. Bul. 35.

Fusarium conglutinans, Calif. Hilgardia, V. 5, No. 1.

Fusarium orthoceras var. *pisi*, Wis. Res. Bul. 97.

Fusarium spp., causing headblight of grain, Minn. Tech. Bul. 74.

Fusarium vasinfectum, Ark. Bul. 234; Fla. Bul. 213.

Fusarium wilt resistance in peas, inheritance, Wis. Res. Bul. 97.

Fusicladium saliciperdu, Conn. State Bul. 302.

Gardens, vegetable, Colo. Bul. 357.

Genealogical tables, Holstein-Friesian sires, Mo. Res. Bul. 144.

Genetics—

- plant, S. Dak. Bul. 237.
- work at Storrs, Conn. Storrs Bul. 168. (See also Heredity.)

Geneva, cucumber variety, developing fruit without pollination, N. Y. State Bul. 580.

Georgia, agricultural experiment station, work, Ga. Bul. 156.

Giberella saubinetii, Minn. Tech. Bul. 59.

Girls—

- boys' and girls' clubs, Va. Bul. 274.
- high school education, S. Dak. Bul. 250.
- metabolism, Ohio Bul. 465.

Gladioli, forcing, Ill. Bul. 357.

Gloeosporium perennans, Oreg. Bul. 243.

Glucose, fermentation in spoiled tomato products, N. Y. State Tech. Bul. 151.

Glypta spp., N. J. Bul. 510.

Goats—

- cryptorchidism, inheritance, Tex. Bul. 407.
- fascioliasis in, Oreg. Bul. 266.
- Golf courses, experiments with grasses, N. J. Bul. 497.

Gossypol, in cottonseed meal and hulls, N. Mex. Bul. 179.

Government—

- cost in Massachusetts, Mass. Bul. 256.
- cost of county boards, N. Y. Cornell Bul. 484.

Larimer County, cost, Colo. Bul. 361.

Graft unions, defective, Mich. Tech. Bul. 99.

Grafting—

- apple trees, Wis. Res. Bul. 94.
- pecans, Miss. Bul. 275.

Grain—

and roughages, grinding, for livestock, S. Dak. Bul. 252.

bulk handling from hillside type combine, Idaho Bul. 175.

combine harvesting, Minn. Bul. 256, 266; N. Dak. Bul. 225; S. Dak. Bul. 244.

combining in weed-free fields, S. Dak. Bul. 251.

cost of production, Ohio Bul. 453.

cropping systems, Iowa Bul. 268.

effect of delayed harvest, Iowa Res. Bul. 130.

harvester-stacker method of harvesting, N. Dak. Bul. 245.

headblight and *Fusarium* spp., Minn. Tech. Bul. 74.

irrigation, Wash. Bul. 240.

marketing, Ill. Bul. 324.

mineral content, Utah Bul. 210.

sorghum. (See Sorghum, grain.)

stored, protection against insects, Ill. Bul. 359.

stores, retail, operating costs, N. H. Bul. 251.

varieties, Minn. Bul. 264.

variety tests, West. Wash. Bul. 11-W; W. Va. Bul. 237.

western Washington, West. Wash. Bul. 11-W.

(See also Cereals.)

Grape industry, economic position, Mo. Bul. 273.

Grape pigments, chemical studies, N. Y. State Tech. Bul. 152.

Grapefruit, transportation costs, Fla. Bul. 217.

Grapes—

berry thinning, Calif. Bul. 492.

cane versus spur pruning, Nebr. Bul. 237.

carbohydrate metabolism, effect of pruning, Calif. Hilgardia, V. 4, No. 6.

dehydration, Calif. Bul. 500.

fruiting habits and pruning, Mich. Tech. Bul. 106.

Ives, anthocyanins in, N. Y. State Tech. Bul. 152.

Muscadine, culture, La. Bul. 213.

pollination, N. Y. State Tech. Bul. 162.

production and marketing, Pa. Bul. 260.

Grapes—Continued.

- pruning, cane versus spur, Nebr. Bul. 237.
- pruning, effect on carbohydrate metabolism, Calif. Hilgardia, V. 4, No. 6.
- pruning, effect on fruit, Mich. Tech. Bul. 106.
- use of sulfur dioxide in shipping, Calif. Bul. 471.
- varieties, Miss. Bul. 281; N. Y. State Bul. 563.
- vinifera, cold-storage and freezing studies, N. Y. Cornell Mem. 131.

Grasses—

- diseases, N. Y. Cornell Mem. 130.
- experiments on golf courses, N. J. Bul. 497.
- hay and pasture, composition, N. Dak. Bul. 236.
- in Maryland, Md. Bul. 323.
- lawn, effect of fertilizers and competition, R. I. Bul. 217.
- pasture, Colo. Bul. 360; Del. Bul. 164; W. Va. Bul. 235.
- pasture, yield and composition, Vt. Bul. 295.
- seeding lawns, Fla. Bul. 209.
- sod forming, study of root systems, Fla. Bul. 211.
- turf, experiments, N. J. Bul. 497.
- (See also Bahia grass, Napier grass, Orchard grass, Reed canary grass, *Stipa pulchra*, Sudan grass.)

Grasshoppers—

- effect of temperature and moisture, Mont. Bul. 223.
- feeding habits, Colo. Bul. 354.

Grasslands, management, Mass. Bul. 262.

Green citrus aphid, biology and control, Fla. Bul. 203.

Green manure—

- bacteriological effects, Miss. Tech. Bul. 17.
- rotations, Miss. Tech. Bul. 17.
- (See also Legumes.)

Greenhouses—

- fumigation for insects, N. Y. Cornell Bul. 474.
- peat on soils, Mich. Spec. Bul. 194.
- soil sterilization in control of nematodes, Ohio Bul. 451.

Grindrod impact sterilizer, milk, N. Y. State Tech. Bul. 155.

Gullies, control, Mo. Bul. 271.

Gymnosporangium spp., on apple, N. Y. Cornell Mem. 123.*Haemonchus contortus*, Conn. Storrs Bul. 157.

"Halo spot," of beans and kudzu, Ga. Bul. 161.

Ham, recipes, Minn. Bul. 254.

Hardpan, lime. (See Caliche.)

Hardwoods. (See Trees, hardwood.)

Harney branch station, irrigated farm, report, Oreg. Bul. 270.

Harvester-stacker, in grain harvesting, N. Dak. Bul. 245.

Harvester-thresher. (See Combine harvester.)

Hay—

- alfalfa, clover, and timothy for, N. J. Bul. 512.
- alfalfa, cost of production, Nev. Bul. 117.
- alfalfa, feeding cows, Wis. Bul. 417.
- alfalfa, treated with calcium arsenate, feeding value, Utah Bul. 223.
- chopping, for livestock, Wis. Res. Bul. 102.
- consumption with corn silage, Conn. Storrs Bul. 167.
- cost of production, Oreg. Bul. 248.
- ground, for milk production, S. C. Bul. 255.
- hoists, electric, Oreg. Bul. 255.
- soybean, ground vs. unground for cows, Md. Bul. 316.
- soybeans for, W. Va. Bul. 227.
- sweet clover, for beef cattle, Minn. Bul. 261.
- wild oat, for steers, Calif. Bul. 481.

Headblight of grain and *Fusarium* spp., Minn. Tech. Bul. 74.

Health, school children, relation to diet, S. C. Bul. 268.

Heaters, solar. (See Solar heaters.)

Heifers—

- feeding for beef, Nebr. Bul. 252.
- self-feeder in wintering, W. Va. Bul. 232.

Heliothis obsoleta, S. C. Bul. 266; Va. Tech. Bul. 40.

Hens—

- calcium metabolism, Ky. Bul. 291.
- cottonseed meal and tankage, N. Mex. Bul. 183.
- effect of vitamin D supplements, Ky. Bul. 304.
- feeding meat scrap and mash, Ky. Bul. 294.
- feeding protein concentrates, Mo. Bul. 288.
- sunlight, requirements, N. Y. State Bul. 572.

Herd charts, vaccination of cattle against *Brucella abortus* infection, Mich. Tech. Bul. 98, Chart Section.

Heredity—

- beans, Minn. Tech. Bul. 68.
- cattle, blue-gray, color and horns, Iowa Res. Bul. 133.
- cattle, body weight and milk secretion, Mo. Res. Bul. 147.
- corn, germless seeds, Iowa Res. Bul. 121.
- corn, virescent seedlings, N. Y. Cornell Mem. 125.
- cotton, fiber length, Ark. Bul. 243.
- cotton, lint percentage, Miss. Tech. Bul. 18.

- Heredity—Continued.
cotton, red plant color, and leaf shape, Ark. Bul. 243.
goats, cryptorchidism, Tex. Bul. 407.
lettuce, Ill. Bul. 356.
maize. (*See* Heredity, corn.)
peas, *Fusarium* wilt resistance, Wis. Res. Bul. 97.
Phaseolus vulgaris. (*See* Heredity, beans.)
plants, experiments, S. Dak. Bul. 237.
potatoes, time of maturity, Minn. Tech. Bul. 58.
poultry, egg-weight, R. I. Bul. 218.
sweet corn, kernel arrangement, Ill. Bul. 320.
Heterodera radicola, N. C. Bul. 265; Ohio Bul. 451.
Hettinger substation, report, N. Dak. Bul. 229, 234.
Hevea rubber seed meal, feeding for milk production, Va. Tech. Bul. 41.
High schools, farm boys and girls, S. Dak. Bul. 250.
Hitches, tractors, Mont. Bul. 229.
Hog cholera and allied diseases, Colo. Bul. 358.
Hog enterprise, Iowa Bul. 270.
Hog products, international trade, Iowa Res. Bul. 122.
Hogging off corn, Mich. Spec. Bul. 200.
Hogs. (*See* Pigs.)
Holly Springs branch experiment station, report, Miss. Bul. 272, 286.
Holstein cattle. (*See* Cattle.)
Home grounds, planting, Miss. Bul. 267.
Homemaking, farm. (*See* Farm homes.)
Honey, use in ice cream, Ill. Bul. 345.
Honeybee. (*See* Bees.)
Hopkinsville experiment field, crop experiments, Ky. Bul. 299.
Hormone—
estrus producing, effect on mammary gland, Mo. Res. Bul. 145.
estrus producing, in urine of cattle, Mo. Res. Bul. 150.
Horse-flies, studies, Ark. Bul. 256.
Horses—
as farm power, Minn. Bul. 262.
energy metabolism, Mo. Res. Bul. 143.
in farm management, Iowa Bul. 264.
labor cost, Oreg. Bul. 250.
"walking disease," cause, Nebr. Res. Bul. 43.
House flies, fumigation with calcium cyanide, S. C. Bul. 256.
Household, farm. (*See* Farm homes.)
Huckleberries, insects, Me. Bul. 356.
Hudson River Valley, fertilizer experiments in apple orchards, N. Y. State Bul. 574.
Hydrocarbon oils—
effect on respiration and twigs, Ill. Bul. 348.
effect on transpiration of fruit trees, Ill. Bul. 353.
Hydrochloric acid, in spray residue removal from fruit, N. Y. State Bul. 575, 579.
Hydrocyanic acid gas, for house fly, S. C. Bul. 256.
Hygienic habits, pre-school children, S. C. Bul. 260.
Hyper humus, on tobacco, Conn. State Bul. 311.
Hypericum perforatum, Calif. Bul. 503.
Hypoderma lineatum and *H. bovis*, Va. Tech. Bul. 39.
Ice cream—
effect of aging the mix on quality, Pa. Bul. 247.
effect of homogenization, Mo. Res. Bul. 127, 134.
effect of processing, Mo. Res. Bul. 128.
effect of sugar and butterfat, Mich. Spec. Bul. 201.
enzyme activity of improvers, Ill. Bul. 333.
frozen sweet cream as ingredient, Mass. Bul. 268.
honey in, Ill. Bul. 345.
mixes, comparison of aging periods, N. Y. State Tech. Bul. 161.
nonacid Babcock test, Ill. Bul. 360.
packaged, Mass. Bul. 269.
testing for butterfat, Nebr. Bul. 246.
Ice crystals, in soil heaving, Mich. Spec. Bul. 192.
Idaho agricultural experiment station, report, Idaho Bul. 164, 170.
Illinoia pisi, Wis. Res. Bul. 93.
Inbreeding—
potatoes, Minn. Tech. Bul. 58.
poultry, relation to egg production, Mass. Bul. 258.
Income—
and expenditures, farm and city, Minn. Bul. 255.
and expenditures, village and town families, Minn. Bul. 253.
farm and taxation, N. C. Bul. 267; Ohio Bul. 457.
farm families, Ky. Bul. 305.
from agriculture, Ohio Bul. 450.
indexes, Minn. Tech. Bul. 72.
money, farm boys, N. Y. Cornell Bul. 512.
Incubation of eggs. (*See* Eggs, incubation.)
Incubators, electric, Wash. Bul. 231.
Index, publications of Connecticut state agricultural experiment station, 1877-1927, Conn. State Bul. 309.
Indexes, prices, quantities, incomes, Minn. Tech. Bul. 72.
Infant foods—
commercial, N. Y. State Bul. 584.
commercial, bacteria in, N. Y. State Tech. Bul. 153, 154.
commercial, sanitary control, N. Y. State Tech. Bul. 154.

Infant nutrition, vitamin B in, Ark. Bul. 252.
 Infectious bronchitis. (*See* Bronchitis.)
 Infectious mastitis. (*See* Mastitis.)
 Inheritance. (*See* Heredity.)
 Inoculation—
 kraut, acid producing bacteria, N. Y. State Tech. Bul. 169.
 legumes, Mo. Bul. 282.
 non-legumes, Iowa Bul. 262.
 soils, with *Azotobacter*, Kans. Tech. Bul. 26.
Inonotus schini, Ariz. Bul. 132.
 Insecticides—
 and fungicides, analyses and inspection, N. J. Bul. 485, 513.
 barium fluosilicate as, Tenn. Bul. 140.
 composition, Conn. State Bul. 300.
 contact, studies, N. H. Tech. Bul. 39, 40.
 contact, surface tension, surface activity, and wetting ability, N. H. Tech. Bul. 39.
 cryolite as, Tenn. Bul. 140.
 petroleum products as, Md. Bul. 310.
 pyrethrum soaps as, Md. Bul. 308.
 Insects—
 blackberry, Ohio Bul. 454.
 blueberries and huckleberries, Me. Bul. 356.
 Montana, Mont. Bul. 238.
 orchard, N. Y. Cornell Bul. 498.
 raspberry, Calif. Bul. 505; Ohio Bul. 454.
 report on, Conn. State Bul. 305, 315.
 scale, Nebr. Res. Bul. 40.
 stored-grain, Ill. Bul. 359.
 strawberries, Fla. Bul. 204.
 Utah, Utah Bul. 216.
 Iodine—
 for iodized milk, Ohio Bul. 446.
 for stomach worms in sheep, Conn. Storrs Bul. 157.
 Iowa County, livestock system, Iowa Bul. 270.
 Iron, for anemic pigs, Wis. Bul. 409.
 Irrigated demonstration farm, Harney branch station, report, Oreg. Bul. 270.
 Irrigated farms, cost of producing crops, Colo. Bul. 353.
 Irrigated pastures, for dairy cattle, Oreg. Bul. 264.
 Irrigation—
 cereal production under, Wash. Bul. 240.
 ditches, Wash. Pop. Bul. 145.
 experiments, Utah Bul. 219.
 lettuce, Ariz. Bul. 133.
 peaches, Calif. Bul. 479.
 project, Newlands, Nev. Bul. 120.
 pumping plants, Colo. Bul. 350.
 rice farms, La. Bul. 216.
 sewage effluent on forage crops, Fla. Bul. 215.

Irrigation—Continued.
 water, measurement and application, Wash. Pop. Bul. 145.
 water requirements of citrus and avocado trees, Calif. Bul. 489.
 wheat, Mont. Bul. 234.
 Ives grapes. (*See* Grapes.)
 Jack pine. (*See* Pine.)
 Japanese cane, effect of sewage effluent, Fla. Bul. 215.
 Japanese persimmon. (*See* Persimmon.)
 Jelly—
 blackberry, standardization, W. Va. Bul. 234.
 pectin studies, Del. Bul. 160.
 Jersey cattle. (*See* Cattle.)
 Johnson grass vs. soybean hay, for mules, Miss. Bul. 270.
 Judith Basin branch station, shelter belt tests, Mont. Bul. 233.
 Kale—
 and corn silage, for milk production, compared, Oreg. Bul. 272.
 cost of production, Oreg. Bul. 251.
 yellows, studies, Calif. Hilgardia, V. 5, No. 1.
 Kansas agricultural experiment station, Tribune branch, report, Kans. Bul. 250.
 Karakul sheep, experiments, Tex. Bul. 405.
 Kerosene stoves, study, Nebr. Res. Bul. 48.
 Kirkland soil. (*See* Soils.)
 Klamath weed. (*See* St. Johnswort.)
 Korean lespedeza, culture, Mo. Bul. 280.
 Kraut. (*See* Sauerkraut.)
 Kudzu, "halo spot," Ga. Bul. 161.
 Labor—
 and farm power, Pa. Bul. 238.
 cost with horses, Oreg. Bul. 250.
 requirements, rice farms, La. Bul. 218.
 Lactation, dietary requirements, Ark. Bul. 250, 251, 252.
Lactobacillus spp.—
 in sauerkraut, N. Y. State Tech. Bul. 168, 169.
 in spoiled tomato products, N. Y. State Tech. Bul. 150, 151.
 Ladybird beetles, Minn. Tech. Bul. 75.
 Lambs—
 corn, barley, and grain sorghum for, Okla. Bul. 196.
 cottonseed meal for, N. Mex. Bul. 179.
 early, production, Pa. Bul. 255.
 fattening, Ill. Bul. 338; Ind. Bul. 333, 334; Minn. Bul. 272; Okla. Bul. 196.
 feeding, Minn. Bul. 272.
 feeding, value of pasture, Ind. Bul. 344.
 from aged ewes, management, Nebr. Bul. 250.
 marketing, Oreg. Bul. 265.
 native, production, Ind. Bul. 344.
 prices and quality, Ky. Bul. 302.
 type test, Ind. Bul. 343.
 western, fattening, Ill. Bul. 338; Ind. Bul. 333, 343.

Land—

- clearing. Minn. Bul. 250.
- marginal. Mo. Bul. 269.
- marginal, utilization. N. Y. Cornell Bul. 476.
- speculation, effect on farm families, Ky. Bul. 300.
- tenure, relation to farm mortgage credit, La. Bul. 208.
- tenure, share leases. Ky. Bul. 307.
- tenure, stock share renting. Va. Bul. 271.
- tenure, studies. Ky. Bul. 303.
- use and taxation, Wis. Bul. 406.
- utilization, Wyoming County. Pa. Bul. 257.
- valuation, Calif. Hilgardia, V. 3, No. 17; Mo. Bul. 269.
- values, effect of improvements, Mo. Bul. 269.
- values, effect of taxes, Oreg. Bul. 257.
- Landscape gardening, home. Miss. Bul. 267.
- Langdon substation, report. N. Dak. Bul. 228.
- Larimer County, Colorado, cost of local government. Colo. Bul. 361.
- Laspeyresia molesta*, Conn. State Bul. 313; N. J. Bul. 510; Ohio Bul. 457; Va. Bul. 270.
- Late blight of celery. Ohio Bul. 461.
- Laurel County—
 - farm management and incomes. Ky. Bul. 305.
 - living costs and population, Ky. Bul. 301.
- Lawn grasses, persistence, effect of fertilizers. R. I. Bul. 217.
- Lawns, seeding, Fla. Bul. 209.
- Lead arsenate, effect on weed seeds, N. Y. Cornell Bul. 508.
- Leaf roller, response to light, N. Y. State Bul. 583.
- Leafhopper—
 - in transmission of yellows disease, Calif. Hilgardia, V. 3, No. 18.
 - on clover and alfalfa, Ky. Bul. 293.
 - (See also Beet leafhopper. Blunt-nosed leafhopper.)
- Leafroll of potato and aphids, N. Y. State Tech. Bul. 171.
- Leases, share, contracts, Ky. Bul. 307.
- Leghorns. (See Poultry.)
- Legume inoculant, inspection, N. J. Bul. 484, 492.
- Legume inoculation. (See Legumes, inoculation.)
- Legumes—
 - as nitrogen source in crop rotations, N. Y. Cornell Bul. 500.
 - bacteria, effect of light on longevity, Mo. Res. Bul. 132.
 - diseases, N. Y. Cornell Mem. 130.
 - effect on crop yields, Ala. Bul. 232.
 - effect on yield of corn, Tenn. Bul. 142.

Legumes—Continued.

- experiments, Ala. Bul. 232.
- inoculation, Mo. Bul. 282.
- Leisure, use in rural areas, S. C. Bul. 263.
- Leon fine sand. (See Soils.)
- Lepidosaphes ulmi*, N. H. Tech. Bul. 40.
- Lespedeza, Korean, culture, Mo. Bul. 280.
- Lettuce—
 - fertilizers, Fla. Bul. 218.
 - inheritance, Ill. Bul. 356.
 - irrigation, Ariz. Bul. 133.
 - yellows, Calif. Hilgardia, V. 3, No. 18.
- Leucocytes in milk, N. Y. State Bul. 568.
- Leuconostoe pleofructi*, in spoiled tomato products, N. Y. State Tech. Bul. 150, 151.
- Leuconostoe* spp., studies, N. Y. State Tech. Bul. 167, 168, 169.
- Leukemia, in fowls, Mo. Bul. 295.
- Libraries, county, Mont. Bul. 219.
- Light intensity, effect on sugar beets, Mich. Tech. Bul. 108.
- Light traps, for bud moth and leaf roller, N. Y. State Bul. 583.
- Lime—
 - analyses and inspection, N. J. Bul. 493.
 - effect in vegetable growing, N. J. Bul. 498.
 - effect on crops, S. C. Bul. 262.
 - hardpan. (See Caliche.)
 - on tobacco soils, Conn. State Bul. 306.
- Lime sulfur—
 - for scale insects, N. H. Tech. Bul. 40.
 - sulfur sulfide content, Colo. Bul. 352.
- Liming materials for soil, comparison. Ind. Bul. 329.
- Linseed meal, in pig feeding, Nebr. Bul. 243.
- Lissonhoptrus simplex*, La. Bul. 214.
- Livestock—
 - chopping hay and steaming feeds for, Wis. Res. Bul. 102.
 - farms, share renting, Va. Bul. 271.
 - grinding grain and roughages, S. Dak. Bul. 252.
 - losses in shipping, Ohio Bul. 438.
 - marketing by truck, Ohio Bul. 440.
 - plant poisoning, Kans. Tech. Bul. 25; N. Mex. Bul. 173.
 - prices, Ill. Bul. 351.
 - shipping associations, Ill. Bul. 331.
 - statistics, Ohio Bul. 442.
 - system, Iowa County, Iowa Bul. 270.
 - truckage rates, Ill. Bul. 342.
 - (See also Cattle, Horses, Mules, Sheep, Swine.)
- Loans, farm. (See Agricultural credit.)
- Locust, black, culture, growth and yield, Pa. Bul. 236.
- Logging, tractor, cost, Calif. Bul. 474.
- Lombardy cattle. (See Cattle.)
- Louisiana agricultural experiment station, North Louisiana station, report, La. Bul. 204.
- Louisiana fruit and truck experiment station, report, La. Bul. 206.

Lumber—

production and wood utilization, Minn. Bul. 271.

(See also Timber, Woodlands.)

Lumnite cement caps, effect on strength of concrete test cylinders, Colo. Bul. 349.

Luperina stipata, biology, Iowa Res. Bul. 125.

Lymanca spp., Oreg. Bul. 266.

Lysimeters—

experiments, N. Y. Cornell Mem. 134; N. Y. State Tech. Bul. 166.

records for tanks, N. Y. Cornell Mem. 134.

Macadamia nut, culture, Hawaii Bul. 59.

Machinery—

farm, and labor, Pa. Bul. 238.

farm, life, service, and cost, Iowa Bul. 260.

farm, survey, Pa. Bul. 237.

(See also Combine harvester, Tractors.)

Macrocentrus spp., N. J. Bul. 510.

Macrosiphum spp., Minn. Tech. Bul. 61.

Magnesium—

in aging of plants, Vt. Bul. 296.

in zeolitic soils, Ariz. Tech. Bul. 26.

Maine agricultural experiment station—

abstracts of papers, finances, meteorology, Me. Bul. 353, 357.

report, Me. Bul. 353, 357.

Maize. (See Corn.)

Maize billbugs, description and control, S. C. Bul. 257.

Malachite green, dye adsorption test for hardness in apple, N. H. Tech. Bul. 44.

Mammals—

incidence of avian tuberculosis, Nebr. Res. Bul. 49.

injurious, Minn. Bul. 259.

Mammary glands—

cattle, embryonic development, Mo. Res. Bul. 140.

effect of estrus producing hormone on growth, Mo. Res. Bul. 145.

Manganese, on truck crops, calcareous glade soils, Fla. Bul. 218.

Mangoes, culture, Hawaii Bul. 58.

Manson's eyeworm of poultry, Fla. Bul. 206.

Manure—

and fertilizers, in vegetable production, Md. Bul. 309.

artificial, effect on crop and soils, Iowa Res. Bul. 127.

artificial, from straw, N. Y. State Bul. 573.

artificial, production, Iowa Res. Bul. 126.

barnyard, composting with sulphur and rock phosphate, Ga. Bul. 154.

for vegetables, R. I. Bul. 225.

green. (See Green manure.)

Maple leaf disease, Conn. State Bul. 316.

Maple mites, description, N. Y. State Tech. Bul. 163.

Maple sugar—

and syrup, cost and profit, Vt. Bul. 292.

production in farm woodlots, Mich.

Spec. Bul. 196.

Margarine fats, in swine feeding, W. Va. Bul. 230.

Marginal lands. (See Land.)

Market requirements, agricultural products, Me. Bul. 355; Va. Bul. 266; W. Va. Bul. 226, 228.

Marketing—

agricultural products, Ill. Bul. 326; W. Va. Bul. 228.

apples, Ark. Bul. 236; Calif. Bul. 501; Mont. Bul. 218; Wash. Bul. 242.

cantaloupes, Del. Bul. 165.

citrus, cost of transportation, Fla. Bul. 217.

cooperative, cotton, Ark. Bul. 245.

cooperative, dairy products, N. Dak. Bul. 238.

cooperative, fruit and vegetables, Mo. Bul. 277.

cooperative, manual, N. C. Bul. 276.

cotton, Ark. Bul. 245.

dairy products, Mo. Bul. 267; N. Dak. Bul. 238; Pa. Bul. 245.

eggs, Ind. Bul. 334; S. Dak. Bul. 243.

fruit and vegetables, Mo. Bul. 277; N. Y. Cornell Bul. 494; Utah Bul. 214.

fruit, in Asia, Calif. Bul. 493.

grain, Ill. Bul. 324.

grapes, Mo. Bul. 273; Pa. Bul. 260.

hogs, Mo. Res. Bul. 146.

lambs, Oreg. Bul. 265.

livestock, by truck, Ohio Bul. 440.

milk, Mich. Spec. Bul. 189; N. J. Bul. 515; N. Y. Cornell Bul. 486; Va. Bul. 275.

milk, northeastern Ohio, Ohio Bul. 469.

milk, organizations, membership problems, Pa. Bul. 256.

milk, price plan, Pa. Bul. 251.

motor transportation, hogs, Ind. Bul. 337.

peaches, Ga. Bul. 155.

peas, N. Y. Cornell Bul. 475.

poultry and eggs, S. Dak. Bul. 243.

prunes, canned, Oreg. Bul. 263.

sheep and wool, Calif. Bul. 473.

strawberries, Md. Bul. 315.

sweet potatoes, Del. Bul. 161.

timber, Ind. Bul. 335.

tomatoes, by grades, Ind. Bul. 336.

vegetables, Mo. Bul. 277.

wheat, Ohio Bul. 458.

woodland products, Va. Bul. 276.

wool, Oreg. Bul. 260.

Markets—

farmers' produce, Ohio Bul. 443.

fruit, in Asia, Calif. Bul. 493.

roadside, N. H. Bul. 249.

terminal, distribution of fruits and vegetables, N. Y. Cornell Bul. 494.

Martyniaceae, systematic botany, N. Y. State Tech. Bul. 149.

- Massachusetts agricultural experiment station, report, Mass. Bul. 247. 260.
- Mastitis, streptococci in relation to, Conn. Storrs Bul. 158.
- Meadow crops, diseases, N. Y. Cornell Mem. 130.
- Medullated wool fiber, Calif. Hilgardia, V. 4, No. 5.
- Melanoplus mexicanus mexicanus*, effect of temperature and moisture, Mont. Bul. 223.
- Melanoplus* spp., Colo. Bul. 354.
- Melons, fertilizer experiments, Ill. Bul. 319.
- Mercuric chloride, potato seed treatment, Nebr. Res. Bul. 44; N. Y. State Bul. 564.
- Mercury compounds—
for potato scab and Rhizoctonia, Conn. Storrs Bul. 164.
test for potato scab and Rhizoctonia, Nebr. Res. Bul. 44.
- Metabolism—
bee colony, Wyo. Bul. 175.
calcium, in hens, Ky. Bul. 291.
energy and nitrogen, animals, Mo. Res. Bul. 143.
sheep, N. H. Tech. Bul. 43.
young women, Ohio Bul. 465.
- Metaxenia in apples, N. Y. State Tech. Bul. 170.
- Meteorological records, Mass. Bul. 270.
- Methylene blue reduction test, milk, Vt. Bul. 312.
- Mexican bean beetle—
control, S. C. Bul. 258.
ecological study, Mass. Bul. 261.
- Microorganisms on brines and liquors, Calif. Hilgardia, V. 4, No. 9.
- Middle Rio Grande Valley, ground water, relation to drainage, N. Mex. Bul. 184.
- Migration, farm, Wash. Bul. 233.
- Milk—
bacteria, N. Y. State Bul. 566.
bacteria, and keeping quality, Vt. Bul. 314, 315, 316, 317, 318.
bacteria, counting, N. Y. State Bul. 567.
bacteria, heat resistant, N. Y. State Bul. 571; Tech. Bul. 156.
bacteria, sterilization, N. Y. State Tech. Bul. 155.
bacteria, udder as source, N. Y. State Tech. Bul. 158.
bacterial flora, N. Y. State Tech. Bul. 165.
collection at plants, economic study, N. Y. Cornell Bul. 486.
composition, studies, Ill. Bul. 325.
consumption, N. J. Bul. 506; Pa. Bul. 245.
cooling, Calif. Bul. 495.
cooling costs, R. I. Bul. 223.
cooling, delayed, effect on quality, Vt. Bul. 313.
cooling, electric, N. Y. State Bul. 581.
- Milk—Continued.
cooling, electric brine cooler vs. ice, Vt. Bul. 300.
cooling, electricity, costs, Conn. Storrs Bul. 170.
cost of handling, N. Y. Cornell Bul. 473.
cost of production. (See Cost of production.)
cream line studies, W. Va. Bul. 229.
creaming, raw and pasteurized, N. Y. State Tech. Bul. 157.
fat globules, study, Mo. Res. Bul. 130.
fermented, reconstructed, Mo. Res. Bul. 135.
for cheddar cheese, Idaho Bul. 174.
grade B, with cash crops and hay, N. Y. Cornell Bul. 483.
keeping quality, methods of determining, Vt. Bul. 314, 315, 316, 317, 318.
leucocytes in, N. Y. State Bul. 568.
market areas, N. J. Bul. 515; Ohio Bul. 469.
marketing. (See Marketing.)
methylene blue reduction test, preparing samples, Vt. Bul. 312.
microscopic appearance, N. Y. State Bul. 566.
pasteurization, effect on creaming, W. Va. Bul. 229.
pasteurization, effect on physical properties, Mo. Res. Bul. 126.
pasteurization, heat resistant bacteria, N. Y. State Bul. 571; Tech. Bul. 156.
pasteurization. (See also Milk, sterilization.)
plants, cost of operation, N. Y. Cornell Bul. 473, 486.
price plan for selling, Pa. Bul. 251.
production, corn vs. sorghum silage for, S. C. Bul. 254.
production, economic study, N. Y. Cornell Bul. 483.
production, ground hay for, S. C. Bul. 255.
production, Hevea rubber seed for, Va. Tech. Bul. 41.
production, high quality, Vt. Bul. 300, 313.
production, kale and silage for, Oreg. Bul. 272.
production. (See also Cows, dairy.)
products, for infant foods, N. Y. State Tech. Bul. 153, 154.
refrigerators, Oreg. Bul. 268.
refrigerators, mechanical, Nebr. Bul. 249.
secretion, relation to inheritance of body weight, Mo. Res. Bul. 147.
standardization with skimmilk powder for cheese, Idaho Bul. 174.
stations, operation, Vt. Bul. 303.

Milk—Continued.

sterilization, grindrod impact sterilizer, N. Y. State Tech. Bul. 155.
straining, N. Y. State Bul. 585.
substitutes, in calf feeding, Mass. Bul. 253.

supply, New Jersey metropolitan market, N. J. Bul. 515.

(See also Dairy products, Dairying.)

Mineral content of grain, Utah Bul. 210.

Minerals—

for anemic pigs, Wis. Bul. 409.
for dairy cattle, Mass. Bul. 255; Mich. Tech. Bul. 105; Ohio Bul. 455; W. Va. Bul. 231.

in feeding stuffs, Mass. Bul. 255.

Mississippi agricultural experiment station—

Holly Springs branch, report, Miss. Bul. 272, 286.

Raymond branch, report, Miss. Bul. 271, 287.

South Mississippi branch station, report, Miss. Bul. 274, 285.

Missouri agricultural experiment station, report, Mo. Bul. 272, 285.

Molasses—

for fattening calves, Ohio Bul. 463.
for steers, Ala. Bul. 231.

Molds in butter, growth, Minn. Tech. Bul. 64.

Molting, effect on egg production, Mass. Bul. 264; N. Y. Cornell Bul. 503.

Money income, farm boys, N. Y. Cornell Bul. 512.

Monilochaetes infuscans, N. C. Bul. 274; Tech. Bul. 38.

Montana state entomologist, report, Mont. Bul. 238.

Mortgages, farm. (See Agricultural credit.)

Mosaic—

beans, studies, Idaho Res. Bul. 7.
tobacco, Ky. Bul. 306.
tobacco, electrophoresis of virus, Calif. Hilgardia, V. 4, No. 15.
virus, tobacco, overwintering, Wis. Res. Bul. 95.

Mosquitoes—

control, N. H. Bul. 243.
effect of chemicals on, N. J. Bul. 496.

Motor transportation, hogs, Ind. Bul. 337.

Motor trucks—

as fruit and vegetable carriers, N. J. Bul. 503.

on farms, N. Y. Cornell Bul. 507.

Motor vehicles, air cleaners, Calif. Bul. 499.

Motors, electric, for farm use, Pa. [Unnumbered Pub.] 1929.

Mulch, paper, effect on plant growth, Ohio Bul. 447.

Mules, feeding experiments, Miss. Bul. 270.

Muskmelon. (See Cantaloupe.)

Napier grass, effect of sewage effluent, Fla. Bul. 215.

Narcissus, hot water treatment, West. Wash. Bul. 13-W.

Natchez branch experiment station, report on pecan work, Miss. Bul. 275.

Necrobiosis et cirrhosis hepatitis enzootica, Nebr. Res. Bul. 43.

Negroes—

churches, rural, Va. Bul. 273.
pre-school children, food and hygiene investigations, S. C. Bul. 260.

Nematode disease of sweet potato, N. C. Bul. 265.

Nematodes—

on sugar cane, La. Bul. 212.
root-knot, in greenhouses, Ohio Bul. 451.

New Hampshire agricultural experiment station, report, N. H. Bul. 238, 250.

New Jersey agricultural experiment station, department of sewage disposal, report, N. J. Bul. 486, 502.

Newlands irrigation project, economic history, Nev. Bul. 120.

Nicotine—

content, tobacco, Conn. State Bul. 311; N. Y. State Bul. 562.
products, for fumigation, N. Y. Cornell Bul. 474.

Nitrate—

effect of artificial manure on production and assimilation, Iowa Res. Bul. 127.
in soil solution, Calif. Hilgardia, V. 4, No. 2.

Nitrate nitrogen and nitrification, effect on tobacco, following timothy, Wis. Res. Bul. 105.

Nitrate of soda—

in sod orchard, Pa. Bul. 249.
on tomatoes, Miss. Bul. 273.

Nitrites, in soils, Tex. Bul. 412.

Nitrogen—

and water relations of crops in rotations, lysimeter experiments, N. Y. State Tech. Bul. 166.

effect on crops, S. C. Bul. 262.

fertilizers, effect on strawberries, Ohio Bul. 466.

fertilizers, for tomatoes, Miss. Bul. 273.

in soil, Colo. Bul. 362, 363, 364.

in soil, effect of climate, Mo. Res. Bul. 152.

in tobacco fertilizers, Va. Tech. Bul. 35.

legumes as source in crop rotations, N. Y. Cornell Bul. 500.

metabolism, animals, Mo. Res. Bul. 143.

sources for potato fertilizer, Me. Bul. 354.

synthetic, on cotton and sweetpotatoes, N. C. Bul. 266.

Non-legumes, inoculation, Iowa Bul. 262.

North Dakota agricultural experiment station—

Edgeley substation, report, N. Dak. Bul. 226.

North Dakota agricultural experiment station—Continued.
 Hettinger substation, report, N. Dak. Bul. 229, 234.
 Langdon substation, report, N. Dak. Bul. 228.
 report, N. Dak. Bul. 233.
 Williston substation, report, N. Dak. Bul. 227, 235.

North Louisiana experiment station, report, La. Bul. 204.

Northern Montana branch station, shelter belt tests, Mont. Bul. 235.

Nummularia discreta, Ill. Bul. 340.

Nutrition—
 children, Fla. Bul. 216; S. C. Bul. 260, 268.
 experiments, Ark. Bul. 250, 251, 252.
 school children, S. C. Bul. 268.
 (See also Animal nutrition, Food.)

Nuts. (See Almonds, Filberts, Macadamia nut, Pecans, Walnuts.)

Oak forests, Mich. Spec. Bul. 190.

Oat kernel, daily growth, Minn. Tech. Bul. 62.

Oats—
 Columbia, tests, Mo. Bul. 278.
 effect of calcium and phosphorus content of soil, Wash. Bul. 243.
 effect of delayed harvest, Iowa Res. Bul. 130.
 effect of sulfur, Tex. Bul. 408.
 germination, effect of immaturity and temperature, Minn. Tech. Bul. 62.
 ground, for cattle, Ind. Bul. 330.
 mineral content, Utah Bul. 210.
 production, Wyo. Bul. 170.
 smut, seed treatment, N. C. Bul. 268.
 varieties, Calif. Bul. 467; Colo. Bul. 370; Ill. Bul. 339; Minn. Bul. 264; Wyo. Bul. 170.
 variety tests, Ill. Bul. 339; Mich. Spec. Bul. 197; Mo. Bul. 278; W. Va. Bul. 237; West. Wash. Bul. 11—W.
 wild. (See Wild oats.)
 with vetch and Austrian peas, for hogs, Ala. Bul. 233.

Oecanthus niveus, Calif. Bul. 505.

Ohio agricultural experiment station, report, Ohio Bul. 431, 446.

Oil emulsions, for stored grain insects, Ill. Bul. 359.

Oil sprays—
 effect on respiration and twigs, fruit trees, Ill. Bul. 348.
 effect on transpiration of fruit trees, Ill. Bul. 353.
 petroleum, Md. Bul. 310.
 preparation and use, N. Mex. Bul. 172.

Oklahoma cotton growers association—
 economic conditions of farmers in relation to, Okla. Bul. 186.
 membership and advancement of farmers, Okla. Bul. 185.

Olethreutes cespitana, N. Y. Cornell Bul. 489.

Olives—
 pickling, Calif. Bul. 498.
 thinning, Calif. Bul. 490.

Onions, culture, muck soils, N. Y. Cornell Bul. 510.

Oranges—
 effect of ethylene gas, Mich. Tech. Bul. 104.
 transportation costs, Fla. Bul. 217.

Orchard grass, culture, Mo. Bul. 294.

Orchards—
 apple. (See Apple orchards.)
 diseases and insects, N. Y. Cornell Bul. 498.
 nitrate and sulfate content of soil, Calif. Hilgardia, V. 4, No. 2.
 soil solution concentration, Calif. Hilgardia, V. 5, No. 3.
 sugar, costs, Vt. Bul. 292.
 sulphate of ammonia and nitrate of soda in, Pa. Bul. 249.

Organizations, rural. (See Rural organizations.)

Oriental fruit moth—
 investigations, Ohio Bul. 457.
 larval parasites, N. J. Bul. 510.
 life history and control, Conn. State Bul. 313; Va. Bul. 270.

Oriental peach moth. (See Oriental fruit moth.)

Oriental vegetables, Hawaii Bul. 60.

Ornamental plants, diseases, Colo. Bul. 351.

Osborne, Thomas B., memorial, Conn. State Bul. 312.

Ox warble flies, studies and control, Va. Tech. Bul. 39.

Oxygen in dormant potato tubers, effect of seed treatment, Calif. Hilgardia, V. 4, No. 11.

Oxytetracycline mansoni, Fla. Bul. 206.

Oyster shell scale, lime sulfur for, N. H. Tech. Bul. 40.

Pacific cooperative wool growers, Oreg. Bul. 260.

Packing houses—
 apple, Inwood, W. Va. Bul. 238.
 citrus, costs, Fla. Bul. 202.

Pale western cutworm, Mont. Bul. 225.

Papain, preparation, Hawaii Bul. 61.

Papaya, culture, Hawaii Bul. 61.

Paper mulch, effect on plant growth and soil moisture, Ohio Bul. 447.

Para rubber seed cake, feeding for milk production, Va. Tech. Bul. 41.

Pasteurization, milk. (See Milk, pasteurization.)

Pasture grass. (See Grasses.)

Pastures—
 and meadows, reed canary grass for, Minn. Bul. 263.
 feeding pigs, Mont. Bul. 236.
 for spring and fall grazing, Colo. Bul. 360.

Pastures—Continued.

- improvement, Conn. Storrs Bul. 155; Del. Bul. 164; Wis. Bul. 414.
- irrigated, for dairy cattle, Oreg. Bul. 264.
- maintenance and improvement, Conn. Storrs Bul. 155.
- management, Mass. Bul. 262; W. Va. Bul. 235; Wis. Bul. 414.
- seeding, Colo. Bul. 360.
- Pea aphid, predacious and parasitic enemies, Wis. Res. Bul. 93.
- Peach buds, resistance to frost, W. Va. Bul. 236.
- Peach stocks, one-year-old and "June-bud," Miss. Bul. 277.
- Peach trees—
 - effect of fertilizers, Ark. Bul. 239.
 - fertilizers, bibliography, Ark. Bul. 239.
 - stocks, Miss. Bul. 277.
- Peaches—
 - calcium sulphide spray, Va. Tech. Bul. 36.
 - canning, effect of irrigation, Calif. Bul. 479.
 - development and ripening, N. J. Bul. 494, 507.
 - diseases and insects, N. Y. Cornell Bul. 498.
 - drying, Calif. Bul. 485.
 - fruit development period, N. J. Bul. 511.
 - histological and microchemical studies, N. J. Bul. 507.
 - irrigation experiments, Calif. Bul. 479.
 - macrochemistry, N. J. Bul. 494.
 - marketing, Ga. Bul. 155.
 - pollination, Mich. Spec. Bul. 188.
 - preservation by freezing, Ga. Bul. 163.
 - production, Wash. Bul. 238.
 - varieties, Miss. Bul. 284; N. Y. State Bul. 563; W. Va. Bul. 222.
- Pear trees—
 - fire blight, Mich. Tech. Bul. 97.
 - grafts, defective, Mich. Tech. Bul. 99.
- Pears—
 - cost of production, Oreg. Bul. 267.
 - diseases and insects, N. Y. Cornell Bul. 498.
 - fire blight, Ark. Bul. 244.
 - harvesting, maturity standards, Calif. Bul. 470.
 - harvesting, storing, and ripening, Oreg. Bul. 254.
 - pollination, Mich. Spec. Bul. 188; N. Y. State Bul. 577.
 - production, Wash. Bul. 238.
 - ripening test, Oreg. Bul. 254.
 - varieties, N. Y. State Bul. 563; W. Va. Bul. 222.
- Peas—
 - field, culture, Wis. Bul. 408.
 - for canning, inheritance of Fusarium wilt resistance, Wis. Res. Bul. 97.
 - for canning, studies, Md. Bul. 306.

Peas—Continued.

- production and marketing, N. Y. Cornell Bul. 475.
- production, economic study, Md. Bul. 305.
- rogues in, Wis. Res. Bul. 101.
- Peat, on soils, in greenhouse, Mich. Spec. Bul. 194.
- Peat soils. (*See Soils.*)
- Pecans, grafting and budding, Miss. Bul. 275.
- Pectin, extraction, Del. Bul. 160.
- Pemphigus rubi*, Minn. Tech. Bul. 61.
- Penetrol, experiments as insecticide, Md. Bul. 310.
- Pennsylvania agricultural experiment station, report, Pa. Bul. 243, 258.
- Pepper tree, timber-rot, Ariz. Bul. 132.
- Peppers—
 - fruit rot, Ga. Bul. 162.
 - pimiento, culture, Ga. Bul. 150.
 - pimiento, effect on poultry, Ga. Bul. 160.
- Perennial canker, relation to apple aphid, Oreg. Bul. 243.
- Persimmon, Japanese, culture and varieties, Fla. Bul. 205.
- Petroleum products, sulphonated oxidized, as insecticide, Md. Bul. 310.
- Phalaris arundinacea*, Minn. Bul. 252.
- Phaseolus vulgaris*, inheritance studies, Minn. Tech. Bul. 68.
- Pheasants, ring-necked, food habits, Nebr. Res. Bul. 50.
- Phosphate rock in manure compost, Ga. Bul. 154.
- Phosphates, comparative values, Tenn. Bul. 141.
- Phosphorus—
 - and calcium in soil, effect on oats and clover, Wash. Bul. 243.
 - available, in soils, Ill. Bul. 337; Wyo. Bul. 168.
 - effect on crops, S. C. Bul. 262.
 - effect on growth of dairy animals, W. Va. Bul. 231.
 - effect on reproduction in rats, Calif. Hilgardia, V. 5, No. 5.
 - in soils, determination, Wyo. Bul. 168.
 - in tobacco fertilizers, Va. Tech. Bul. 35.
 - soluble, in field soils, studies, Mich. Tech. Bul. 101.
 - sources, field tests, Pa. Bul. 252.
- Phymatotrichum omnivorum*, Tex. Bul. 393.
- Phytomonas* spp., on beans, N. Y. Cornell Mem. 127.
- Phytonomus posticus* Gyllenhal, Wyo. Bul. 167.
- Pickling, olives, Calif. Bul. 498.
- Pig survey reports, Mo. Res. Bul. 139.
- Pigs—
 - anemia in, mineral feeding, Wis. Bul. 409.

Pigs—Continued.

- barley for, Nebr. Bul. 251.
- corn and soybeans for, Miss. Bul. 283.
- cost of raising to weaning age, N. C. Bul. 272.
- cottonseed meal as feed, Tex. Bul. 410.
- fattening, Oreg. Bul. 269.
- fattening, soybeans as substitute for tankage, Ind. Bul. 341.
- feeding, Nebr. Bul. 243.
- feeding experiments, Mich. Spec. Bul. 199.
- grading up by purebred sires, Ala. Bul. 234.
- management, N. Dak. Bul. 230.
- marketing, Mo. Res. Bul. 146.
- marketing by motor, Ind. Bul. 337.
- oats, vetch, Austrian peas, fattening, Ala. Bul. 233.
- pasture crops for, Mont. Bul. 236.
- soybeans and soybean oilmeal for, Ohio Bul. 452.
- tattooing, N. Dak. Bul. 233.
- two-litter system, Ind. Bul. 338.
- (See also Pork, Swine.)

Pimiento peppers. (See Peppers.)

Pine—

- blister rust, control, Conn. State Bul. 314.
 - damping off, soil treatment, N. Y. Cornell Mem. 124.
 - jack, yield in Lake States, Wis. Res. Bul. 90.
 - plantations, thinnings and change in environmental factors, Vt. Bul. 310.
 - white. (See White pine.)
- Pissodes strobi*, N. H. Bul. 247.
- Plant and soil relations, Ariz. Tech. Bul. 25, 29.

Plant heredity, studies, S. Dak. Bul. 237.

Plants—

- aging, magnesium in, Vt. Bul. 296.
 - containers for starting, Pa. Bul. 244.
 - effect of potassium deficiency, N. J. Bul. 499.
 - heaving, in frost injury, Mich. Spec. Bul. 192.
 - maintenance of moisture equilibrium, Ariz. Tech. Bul. 29.
 - ornamental, Mass. Bul. 267.
 - ornamental, diseases, Colo. Bul. 351.
 - poisonous to livestock, Kans. Tech. Bul. 25; Nebr. Res. Bul. 43; N. Mex. Bul. 173.
 - susceptible or resistant to cotton root rot, Tex. Bul. 393.
 - woody, Mass. Bul. 267.
- Plaster of paris caps, effect on strength of concrete test cylinders, Colo. Bul. 349.
- Plum curculio, on apple, Conn. State Bul. 301; Mass. Bul. 249.
- Plumage, silver spangled fowl, studies, Conn. Storrs Bul. 163.

Plums—

- diseases and insects, N. Y. Cornell Bul. 498.

Plums—Continued.

- experiments, N. Mex. Bul. 174.
 - pollination, Mich. Spec. Bul. 188; N. Y. State Bul. 577.
 - varieties, N. Y. State Bul. 563; W. Va. Bul. 222.
 - variety test, N. Mex. Bul. 174.
 - (See also Prunes.)
- Poisonous plants. (See Plants poisonous to livestock.)
- Pollen, apple, effect of dusting sulfur, N. Y. Cornell Bul. 499.
- Pollination—
- apples, Mich. Spec. Bul. 188; Mo. Res. Bul. 138.
 - apples, cross-unfruitfulness, N. Y. State Tech. Bul. 159.
 - apples, effect on set of fruit, N. Y. Cornell Bul. 497.
 - fruit, Mich. Spec. Bul. 188; Mo. Bul. 283.
 - fruit, effect on set of fruit, N. Y. Cornell Bul. 497.
 - fruit trees, N. Y. State Bul. 577.
 - grapes, N. Y. State Tech. Bul. 162.
 - peaches, Mich. Spec. Bul. 188.
 - pears, Mich. Spec. Bul. 188; N. Y. State Bul. 577.

Population—

- farm, migration, Wash. Bul. 233.
- Iowa, composition and changes, Iowa. Bul. 275.
- migration of sons and daughters of white farmers, N. C. Bul. 275.
- rural, movement, Ohio Bul. 467.
- rural, studies, N. Y. Cornell Bul. 487.
- trends, Laurel County, Ky. Bul. 301.

Porcine infectious abortion. (See Abortion in swine.)

Pork—

- and pork products, international trade, Iowa. Res. Bul. 122.
- composition and cost, Ill. Bul. 330.
- cuts, relative economy, Ill. Bul. 330.
- cuts, selection and cooking, Minn. Bul. 254.
- production, Nebr. Bul. 243.
- production, corn and soybeans for, Miss. Bul. 283.
- quality and quantity, effect of growth and fattening, Ind. Bul. 340.
- quality and type of swine, Ill. Bul. 322.
- (See also Pigs, Swine.)

Porosagrotis orthogonia, Mont. Bul. 225.

Potash—

- effect on crops, S. C. Bul. 262.
- experiments with tobacco, Conn. State Bul. 299, 311.
- on tobacco, Conn. State Bul. 311.
- relation to cotton wilt, Fla. Bul. 213.

Potassium—

- content of tobacco, Ky. Bul. 308.
- deficiency, effect on plants, N. J. Bul. 499.
- in soil, Colo. Bul. 362, 363, 364.
- in tobacco fertilizers, Va. Tech. Bul. 35.

- Potato flea-beetles, Ky. Bul. 297.
 Potato leafhopper, on clover and alfalfa, Ky. Bul. 293.
 Potato scab—
 organic mercury compounds, Conn. Storrs Bul. 164.
 seed treatment tests, Nebr. Res. Bul. 44.
 Potato tubers—
 dormant, effect of treatments on carbon dioxide and oxygen in, Calif. Hilgardia, V. 4, No. 11.
 sprouting, aphids on, N. Y. State Tech. Bul. 171.
 Potato-virus diseases, Mont. Bul. 231.
 Potatoes—
 blight control, spraying and dusting, Fla. Bul. 222.
 breeding, methods, Minn. Tech. Bul. 58.
 cost of production, N. H. Bul. 239.
 culture, Ill. Bul. 344.
 degeneration, Conn. Storrs Bul. 160.
 degeneration, relation to tobacco viruses, Ky. Bul. 309.
 diseases, Mont. Bul. 227; Ohio Bul. 432.
 diseases, virus, Mont. Bul. 231; Wis. Res. Bul. 87.
 effect of seed treatment, Fla. Bul. 220.
 fertilizers, Me. Bul. 350, 354.
 prices, Idaho Bul. 166.
 rate of planting, and sprouting habit, Ohio Bul. 462.
 Rhizoctonia, seed treatment, Fla. Bul. 220.
 scabby, value, Vt. Bul. 297.
 seed, effect of cultural methods and maturity, Nebr. Res. Bul. 45.
 seed, multiple sprouting, Ohio Bul. 430.
 seed piece, size, Ohio Bul. 462.
 seed, tests, Md. Bul. 317.
 seed treatment, N. Y. State Bul. 564.
 seed treatment for scab and Rhizoctonia, Conn. Storrs Bul. 164; Nebr. Res. Bul. 44.
 selection in inbred lines, Minn. Tech. Bul. 58.
 spindle tuber and curly dwarf, symptoms, Nebr. Res. Bul. 47.
 spraying and dusting, Fla. Bul. 222; Me. Bul. 352.
 tubers, gaseous changes accompanying treatments, Calif. Hilgardia, V. 4, No. 11.
 varieties, Colo. Bul. 359.
 virus diseases, Mont. Bul. 231; Wis. Res. Bul. 87.
 Poultry—
 and eggs, demand in White Mountains, N. H. Bul. 241.
 bacillary white diarrhea. (*See* Bacillary white diarrhea.)
 breeding, Iowa Bul. 258; Kans. Bul. 252.
 bronchitis, Calif. Bul. 494.

Poultry—Continued.

- brooders, electric, Oreg. Bul. 262; Wash. Bul. 231.
 coccidiosis, Mo. Bul. 289.
 confined, management, Pa. Bul. 246.
 crossbred, Kans. Bul. 252.
 cutaneous vaccination for fowl pox, Mass. Bul. 257.
 diseases, Colo. Bul. 372.
 diseases and parasites, N. C. Bul. 264.
 diseases, prevention and control, Kans. Bul. 247.
 egg production. (*See* Eggs, production).
 egg weight, effect of selection, R. I. Bul. 218.
 energy metabolism, Mo. Res. Bul. 143.
 epithelioma. (*See* Epithelioma.)
 feeding, S. Dak. Bul. 242.
 fowl pox, Idaho Bul. 168.
 houses and equipment, Calif. Bul. 476.
 houses, and winter egg production, Nebr. Bul. 247.
 inbreeding, relation to egg production, Mass. Bul. 258.
 Leghorn, body weight and egg weight, W. Va. Bul. 233.
 Leghorn, egg production, effect of maturity, Iowa Res. Bul. 119.
 leukemia in, Mo. Bul. 295.
 Manson's eyeworm, Fla. Bul. 206.
 marketing, S. Dak. Bul. 243.
 molting, effect on egg production, Mass. Bul. 264; N. Y. Cornell Bul. 503.
 mortality, N. C. Bul. 264.
 pathogenicity of genus *Brucella*, Mich. Tech. Bul. 103.
 pimiento pepper for, Ga. Bul. 160.
 profits, variation, Mass. Bul. 251.
 Rhode Island Reds, rate of growth, Mass. Bul. 259.
 roup vaccination, Wyo. Bul. 172.
 silver spangled, plumage studies, Conn. Storrs Bul. 163.
 White Leghorns. (*See* Poultry, Leghorn).
 yard soil, *Salmonella pullorum* in, Tenn. Bul. 143.
 (*See also* Chickens, Chicks, Hens.)
 Power. (*See* Farm power.)
 Precipitation, and soil erosion, Tex. Bul. 411.
 Pressure tester, for determining maturity of fruit, Calif. Bul. 470.
 Price index, farm real estate, Mich. Tech. Bul. 96.
 Prices—
 agricultural products, Ill. Bul. 351, 363; Md. Bul. 321; Mo. Res. Bul. 151; N. Dak. Bul. 232; Utah Bul. 217; Va. Tech. Bul. 37.
 apples, N. Y. Cornell Bul. 495; Oreg. Bul. 244.

Prices—Continued.

- apples, and costs of marketing, Wash. Bul. 242.
- asparagus, Calif. Bul. 487.
- cherries, Calif. Bul. 488.
- cotton, Ga. Bul. 165.
- farm products. (*See* Prices, agricultural products.)
- historical study, Va. Tech. Bul. 37.
- indexes, Minn. Tech. Bul. 72.
- lambs, relation to quality, Ky. Bul. 302.
- land, Calif. Hilgardia, V. 3, No. 17.
- livestock, Ill. Bul. 351; Utah Bul. 217.
- milk, Pa. Bul. 251.
- potatoes, studies, Idaho Bul. 166.
- real estate, Mich. Tech. Bul. 96.
- sheep and wool, Calif. Bul. 473.
- steers, Idaho Bul. 172.
- variations in farm products and supplies, Mo. Res. Bul. 151.
- walnuts, Calif. Bul. 475.
- wheat, Calif. Bul. 502.
- Progeny performance, Holstein-Friesian sires, Mo. Res. Bul. 144.
- Protein concentrates for egg production, Mo. Bul. 288.
- Protein, in wheat, effect of fallow, Mont. Bul. 222.
- Prune pulp, preparation and use, Calif. Bul. 483.
- Prunes—
 - dried, composition and food value, Oreg. Bul. 249.
 - dried, grading, Oreg. Bul. 252.
 - fresh, canning cost, Oreg. Bul. 263.
 - maturity tests, Idaho Bul. 167.
 - storage and maturity studies, Idaho Bul. 167.
 - surplus, utilization, Calif. Bul. 483.
- Pruning—
 - grapes, Mich. Tech. Bul. 106; Nebr. Bul. 237.
 - grapes, dormant, Calif. Hilgardia, V. 4, No. 6.
- Public education. (*See* Education.)
- Puccinia graminis tritici*, physiologic resistance to, Minn. Tech. Bul. 67.
- Pullorin test—
 - bacillary white diarrhea, Calif. Bul. 486.
 - for *Bacterium pullorum* carriers, Calif. Hilgardia, V. 4, No. 8.
- Pullorum disease. (*See* Bacillary white diarrhea.)
- Pullorum infection, effect on poultry and eggs, Va. Bul. 265.
- Pumpkins, breeding, Iowa Bul. 263.
- Pumps, irrigation, Colo. Bul. 350.
- Purchase Region, farming systems, Ky. Bul. 292.
- Purchasing associations, cooperative. (*See* Cooperative purchasing associations.)
- Putting greens. (*See* Golf courses.)
- Pyrausta nubilalis*, Mich. Spec. Bul. 204.

Pyrethrum soap—

- insecticidal value, Md. Bul. 308.
- sprays, for Mexican bean beetle, S. C. Bul. 258.
- Pythium, injuries to sugar cane, La. Bul. 212.
- Quack grass, control by tillage, N. Dak. Bul. 244.
- Quinces, diseases and insects, N. Y. Cornell Bul. 498.
- Rabbits, effect of estrus producing hormone on growth of mammary gland, Mo. Res. Bul. 145.
- Rainfall. (*See* Precipitation.)
- Raisins, dehydration, Calif. Bul. 500.
- Rambouillet sheep. (*See* Sheep.)
- Rams, fleeces, analysis, Calif. Hilgardia, V. 3, No. 19.
- Ranches—
 - cattle, organization and management, N. Dak. Bul. 237; S. Dak. Bul. 255.
 - income and management, Tex. Bul. 413.
- Range cattle, growth, Tex. Bul. 409.
- Range sheep production, Ariz. Bul. 134.
- Ranges—
 - effect of climate, N. Mex. Bul. 182.
 - sagebrush, seeding, experiments, Colo. Bul. 356.
 - St. Johnswort eradication, Calif. Bul. 503.
 - supplemental cattle feeding, N. Mex. Bul. 185.
- Raritan River pollution, N. J. Bul. 489.
- Raspberries—
 - black, production, prices and costs, Md. Bul. 322.
 - cultivation, West. Wash. Bul. 16—W.
 - culture, Mo. Bul. 265; Ohio Bul. 454.
 - diseases, Ohio Bul. 454.
 - fruiting habit, Colo. Bul. 367.
 - insects, Calif. Bul. 505; Ohio Bul. 454.
 - senescence in canes, Minn. Tech. Bul. 69.
 - snowy tree cricket on, Calif. Bul. 505.
 - varieties, N. Y. State Bul. 563.
 - varieties, identification, Minn. Tech. Bul. 66.
- Raspberry aphids, studies, Minn. Tech. Bul. 61.
- Raspberry canes, senescence, Minn. Tech. Bul. 69.
- Raspberry industry, survey, Md. Bul. 322.
- Rats—
 - effects of calcium and phosphorus intake on reproduction, Calif. Hilgardia, V. 5, No. 5.
 - metabolism, Mo. Res. Bul. 143.
 - nutrition experiments with, Ark. Bul. 250, 251, 252.
- Raymond branch experiment station, report, Miss. Bul. 271, 287.
- Real estate—
 - farm and city, taxation, Oreg. Bul. 257; Va. Bul. 268.
 - farm, price index, Mich. Tech. Bul. 96.

- Reed canary grass—
as forage, Minn. Bul. 252.
for meadows and pasture, Minn. Bul. 263.
- Refrigerating plants, dairy, Calif. Bul. 495.
- Refrigeration—
fruits in shipping, Ill. Bul. 334.
milk, costs, R. I. Bul. 223.
- Refrigerator cars, for fruit, temperature, Calif. Bul. 496.
- Refrigerators—
home, cost of electricity, S. Dak. Bul. 241.
home, electric, operation and cost, N. H. Bul. 244.
mechanical, for dairy, Nebr. Bul. 249.
milk, Oreg. Bul. 268.
- Renting—
stock share system, Va. Bul. 271.
(See also Leases.)
- Rents, relation of taxes to, Va. Bul. 268.
- Respiration apparatus, in animal nutrition studies, N. H. Bul. 240.
- Rhinohyperplasia, in swine, Calif. Hilgardia, V. 4, No. 13.
- Rhizoctonia—
conifers, damping-off, N. Y. Cornell Mem. 124.
potatoes, mercury compounds for, Conn. Storrs Bul. 164.
potatoes, seed treatment test, Nebr. Res. Bul. 44.
- Rhizoctonosis of potato, effect of seed treatment, Fla. Bul. 220.
- Rhode Island Reds. (See Poultry.)
- Rhopalosiphum prunifoliae*, Ohio Bul. 464.
- Rice—
experiment station, report, La. Bul. 205.
farming area, economic problems, La. Bul. 217.
farms, irrigation, La. Bul. 216.
farms, tractors and trucks on, La. Bul. 218.
fertilizers, Tex. Bul. 398.
fields, drainage, Calif. Bul. 464.
water weevil, damage, La. Bul. 214.
weevil, on corn, relation to shuck characters, S. C. Bul. 266.
- Richmond milk producing area, dairy farm management, Va. Bul. 272.
- Ridglings, goats, hereditary study, Tex. Bul. 407.
- Ringling, effect on tissues of apple, N. Y. Cornell Mem. 133.
- Rio Grande Valley, citrus production, Tex. Bul. 419.
- Roads and agriculture, N. Y. Cornell Bul. 479.
- Roadside markets, N. H. Bul. 249.
- Rodenticides, composition, Conn. State Bul. 300.
- Rogue River Valley, cost of production of pears, Oreg. Bul. 267.
- Root development and soil moisture, Calif. Hilgardia, V. 4, No. 4.
- Root-knot nematode, Ohio Bul. 451.
- Root rot disease, plants susceptible or resistant, Tex. Bul. 393.
- Root rot of sugar cane, La. Bul. 212.
- Roses—
budded and grafted, Ill. Bul. 358.
hardy, S. Dak. Bul. 240.
- Rosy aphid, spraying, N. Y. State Bul. 582.
- Rotation of crops. (See Crop rotations.)
- Roughages—
for steers, Miss. Bul. 278.
grinding, for livestock, S. Dak. Bul. 252.
- Roup, vaccination studies, Wyo. Bul. 172.
- Rubber seed meal, feeding, for milk production, Va. Tech. Bul. 41.
- Rural church. (See Churches.)
- Rural community—
clubs, Mont. Bul. 224.
contacts in, Mo. Res. Bul. 125.
halls, Mont. Bul. 221.
social studies, N. Y. Cornell Bul. 501, 504.
use of leisure, S. C. Bul. 263.
- Rural organizations—
and the farm family, Wis. Res. Bul. 96.
membership, and farmers' advancement, Okla. Bul. 185.
social, Minn. Bul. 269.
young people, Va. Bul. 274.
(See also County boards, Community clubs, Service agencies.)
- Rural population. (See Population.)
- Rural trade centers, Minn. Bul. 269.
- Rural-urban trade area, study, Ill. Bul. 326.
- Rusts—
of Pennsylvania, Pa. Bul. 239.
on apple, N. Y. Cornell Mem. 123.
on wheat, resistance studies, Minn. Tech. Bul. 67.
- Rye—
varieties, Minn. Bul. 264.
variety tests, West. Wash. Bul. 11-W; W. Va. Bul. 237.
- Sagebrush range, improvement, Colo. Bul. 356.
- St. Augustine grass, chinch bug on, Fla. Bul. 209.
- St. Johnswort, eradication, Calif. Bul. 503.
- Salmonella pullorum*—
and pullorum disease, Ky. Bul. 296; N. C. Tech. Bul. 36; Va. Bul. 265.
in poultry-yard soil, Tenn. Bul. 143.
production of gas, R. I. Bul. 222.
- Salt—
for mules, Miss. Bul. 270.
in control of ox warble flies, Va. Tech. Bul. 39.
- San José scale, lime sulfur spray for, N. H. Tech. Bul. 40.
- Sauerkraut—
fermentation, effect of inoculation, N. Y. State Tech. Bul. 169.
fermentation, floral changes, N. Y. State Tech. Bul. 168.

- Schinus molle*, Ariz. Bul. 132.
 School lunches, Mass. Bul. 263.
 Schools. (See also High schools.)
 Scurf, of sweet potato, N. C. Bul. 274;
 Tech. Bul. 38.
 Seed—
 germless, inheritance in maize, Iowa
 Res. Bul. 121.
 inspection, N. H. Bul. 246, 252; N. J.
 Bul. 484, 492; Vt. Bul. 306, 322.
 potato. (See Potatoes, seed.)
 testing, N. H. Bul. 246, 252.
 tobacco, germination, Wis. Res. Bul.
 104.
 treatment, potatoes, Fla. Bul. 220.
 vegetable, quality of packet, N. Y.
 State Bul. 565, 587.
 Seedling blight of corn, Iowa Res. Bul.
 124.
 Seedlings, fruit, N. Y. State Bul. 569.
 Self feeder—
 calves, S. Dak. Bul. 236.
 dairy heifers, W. Va. Bul. 232.
 Semesan, experiments, seed potatoes, N. Y.
 State Bul. 564.
Senecio spp., in livestock poisoning, Nebr.
 Res. Bul. 43.
Septoria apii, Ohio Bul. 461.
 Service agencies, N. Y. Cornell Bul. 493;
 Okla. Bul. 194.
 Sewage disposal—
 department, report, N. J. Bul. 486,
 502.
 farm homes, Nebr. Bul. 245.
 investigations, N. J. Bul. 486, 502.
 Sewage effluent, effect on Japanese cane
 and Napier grass, Fla. Bul. 215.
 Sewage pollution, Raritan River, N. J. Bul.
 489.
 Sewage solids, action of enzymes, N. J.
 Bul. 500.
 Sewing center, organization in home, N. Y.
 Cornell Bul. 492.
 Sheep—
 digestibility of constituents of nitro-
 gen-free extract of feed, Tex. Bul.
 418.
 energy metabolism, Mo. Res. Bul. 143;
 N. H. Tech. Bul. 43.
 fascioliasis, Oreg. Bul. 266.
 feeding, Ind. Bul. 333, 343.
 ground grains and alfalfa for, S. Dak.
 Bul. 252.
 industry, economic aspects, Calif. Bul.
 473.
 Karakul, experiments, Tex. Bul. 405.
 production, prices, marketing, Calif.
 Bul. 473.
 Rambouillet, wool studies, Wyo. Bul.
 174.
 range, production, Ariz. Bul. 134.
 stomach worms, Conn. Storrs Bul.
 157.
 (See also Ewes, Lambs, Rams.)
 Shelter belts—
 dry land tests, Judith Basin, Mont.
 Bul. 233.
 dry land tests, Northern Montana
 branch station, Mont. Bul. 235.
 planting, Wyo. Bul. 163.
 (See also Windbreaks.)
 Shorthorn cattle. (See Cattle.)
 Shrubs, hardy, Mass. Bul. 267.
 Silage—
 corn, compared with kale for milk pro-
 duction, Oreg. Bul. 272.
 corn, feeding, Conn. Storrs Bul. 159,
 167, 169.
 corn, feeding, beef cattle, Tenn. Bul.
 144.
 corn, soft, for swine, Iowa Bul. 273.
 corn, varieties, Utah Bul. 211.
 corn vs. sorghum, for milk production,
 S. C. Bul. 254.
 cost of production, Oreg. Bul. 251.
 cutter, electric, Pa. [Unnumbered
 Pub.] 1929.
 feeding, Mo. Bul. 287.
 kale, for milk production, Oreg. Bul.
 272.
 production and feeding, Mo. Bul. 287.
 soybeans for, W. Va. Bul. 227.
 Silos, filling, Mo. Bul. 287.
 Silver spangled fowl, plumage studies,
 Conn. Storrs Bul. 163.
 Sires—
 dairy, feeding and management, Mo.
 Bul. 275.
 dairy, selection, Mo. Bul. 274.
 Holstein-Friesian, progeny performance
 and genealogical tables, Mo. Res.
 Bul. 144.
 in herd improvement, Idaho Bul. 163.
 purebred, in hog breeding, Ala. Bul.
 234.
Sitophilus oryza, S. C. Bul. 266.
 Six-spotted leafhopper, in transmission of
 yellows, Calif. Hilgardia, V. 3, No. 18.
 Skimmilk—
 powder, in cheddar cheese making,
 Idaho Bul. 174.
 reconstructed, for commercial butter-
 milk, Mo. Res. Bul. 135.
 Sludge, sewage, studies, N. J. Bul. 486, 502.
 Smuts—
 of oats, seed treatment, N. C. Bul. 268.
 wheat, N. Dak. Bul. 231.
 Snails, as host of *Fasciola hepatica*, Oreg.
 Bul. 266.
 Snakes, of Utah, Utah Bul. 221.
 Snowy tree cricket, on raspberries, Calif.
 Bul. 505.
 Social relationships, Tompkins County,
 N. Y. Cornell Bul. 501.
 Sociological study of Dryden, N. Y. Cornell
 Bul. 504.
 Sodium acid sulphate, disinfectant for
 poultry yard soils, Tenn. Bul. 143.
 Sodium chlorate, eradication of bindweed,
 Wash. Bul. 235.

Soft corn. (*See* Corn.)

Soil dynamics, research, as applied to implement design, Ala. Bul. 229.

Soil erosion—

and run-off, Tex. Bul. 411.

control, Wis. Res. Bul. 99.

control of gullies, Mo. Bul. 271.

Soil experiment fields, crop yields, Ill. Bul. 327, 347.

Soil fertility, as factor in land appraisal, Mo. Bul. 269.

Soil moisture—

and crop yields, Okla. Bul. 190, 192.

and plant nutrition, Ariz. Tech. Bul. 29.

and root development, Calif. Hilgardia, V. 4, No. 4.

heavy soils, Okla. Bul. 190, 193.

relation to plant wilting, Ariz. Tech. Bul. 25.

Soil profiles—

microbiological studies, Iowa Res. Bul. 132.

preparation for soil study, N. Y. State Tech. Bul. 173.

Soil reconnaissance. (*See* Soil survey.)

Soil solution—

concentration, under orchard conditions, Calif. Hilgardia, V. 5, No. 3.

nitrate and sulfate content, orchards, Calif. Hilgardia, V. 4, No. 2.

Soil sterilization, greenhouse, for nematodes, Ohio Bul. 451.

Soil surveys—

Illinois—

Coles County, Ill. Soil Rpt. 44.

Douglas County, Ill. Soil Rpt. 43.

Edwards County, Ill. Soil Rpt. 46.

Macon County, Ill. Soil Rpt. 45.

Morgan County, Ill. Soil Rpt. 42.

Piatt County, Ill. Soil Rpt. 47.

Iowa—

Carroll County, Iowa Soil Rpt. 60.

Cherokee County, Iowa Soil Rpt. 59.

Chickasaw County, Iowa Soil Rpt. 63.

Clayton County, Iowa Soil Rpt. 65.

Delaware County, Iowa Soil Rpt. 56.

Fremont County, Iowa Soil Rpt. 58.

Harrison County, Iowa Soil Rpt. 55.

Howard County, Iowa Soil Rpt. 61.

Jones County, Iowa Soil Rpt. 57.

Kossuth County, Iowa Soil Rpt. 64.

Plymouth County, Iowa Soil Rpt. 54.

Warren County, Iowa Soil Rpt. 62.

Montana—

Blaine County, Mont. Bul. 228.

Soil temperature—

and air, comparison of daytime and nighttime, Calif. Hilgardia, V. 4, No. 10.

Soil temperature—Continued.

and air temperature, Calif. Hilgardia, V. 4, No. 3.

Soil zeolites. (*See* Zeolites.)

Soils—

alkali, management, Iowa Bul. 266.

and crop management, N. Y. Cornell Bul. 482, 514.

and land cover, Conn. Bul. 320.

artificial manure experiments, Iowa Res. Bul. 127.

bacteria, effect of non-nitrogenous compounds on growth, N. Y. State Tech. Bul. 172.

base-exchange capacity, Ariz. Tech. Bul. 28.

base exchange, organic matter, Ariz. Tech. Bul. 30.

basicity, Tex. Bul. 400.

brown, of red prairie, fertilizer study, Okla. Bul. 188, 189.

buffer action, Del. Bul. 166.

buffer capacity, Tex. Bul. 400.

calcareous glade, fertilizer experiments with truck crops, Fla. Bul. 218.

caliche formation, Ariz. Bul. 131.

Cecil sandy clay loam, crop experiments, Ga. Bul. 151.

chemical composition, Conn. State Bul. 320; N. Y. Cornell Bul. 513.

chemical composition, McHenry County, N. Dak. Bul. 240.

colloidal clay, effect of exchangeable cations, Mo. Res. Bul. 129.

Connecticut, Conn. State Bul. 320.

effect of clover and alfalfa, Colo. Bul. 362, 363, 364.

electro-dialysis, Del. Bul. 166.

fertilizer experiments, Ill. Bul. 362; Iowa Bul. 269.

heaving, Mich. Spec. Bul. 192.

inoculation with *Azotobacter*, Kans. Tech. Bul. 26.

Kirkland, fertility studies, Okla. Bul. 188, 189.

Leon fine sand, celery and lettuce on, Fla. Bul. 218.

liming materials, Ind. Bul. 329.

lysimeter experiments, N. Y. Cornell Mem. 134.

management, Ill. Bul. 362.

Missouri, Mo. Bul. 264.

moisture. (*See* Soil moisture.)

muck, growing onions, N. Y. Cornell Bul. 510.

nitrites in, Tex. Bul. 412.

nitrogen and organic matter content, effect of climate, Mo. Res. Bul. 152.

orchard, management, Va. Bul. 269.

peat, management, Iowa Bul. 266.

phosphorus determination, Wyo. Bul. 168.

phosphorus in, Ill. Bul. 337.

phosphorus, water soluble, test, Mich. Tech. Bul. 101.

Soils—Continued.

- sandy, management, Wis. Bul. 416.
- solutions. (*See* Soil solution.)
- sulfur as amendment, Tex. Bul. 414.
- tobacco, liming, Conn. State Bul. 306.
- Wheatland project, studies, Wyo. Bul. 168.
- wilting percentage, and maintenance of moisture equilibrium of plants, Ariz. Tech. Bul. 29.
- wilting percentage and plant relations, Ariz. Tech. Bul. 25.
- zeolitic, magnesium and calcium in, Ariz. Tech. Bul. 26.
- Soilvita, for inoculation of non-legumes, Iowa Bul. 262.
- Solar heater, Calif. Bul. 469.
- Solute translocation, effect of spiral ringing, N. Y. Cornell Mem. 133.
- Sons and daughters of white farmers, migration, N. C. Bul. 275.
- Sorghum—
 - culture, on high plains, Okla. Bul. 191.
 - grain, for fattening lambs, Okla. Bul. 196.
 - grain, harvesting and root-cutting, Calif. Bul. 477.
 - silage. (*See* Silage.)
 - sweet, for syrup and forage, Ark. Bul. 241.
 - varieties, Okla. Bul. 191.
- South Mississippi branch station, report, Miss. Bul. 274, 285.
- Southern corn rootworm, Ala. Bul. 230; Ark. Bul. 232.
- Soybean hay. (*See* Hay.)
- Soybean oil meal, for swine, Mo. Bul. 266; Ohio Bul. 452.
- Soybeans—
 - classification, Mo. Res. Bul. 131.
 - culture, Kans. Bul. 249.
 - for pigs, Ind. Bul. 341; Ohio Bul. 452.
 - for pork production, Miss. Bul. 283.
 - for silage and hay, W. Va. Bul. 227.
 - for swine, Mo. Bul. 266.
 - Illini, tests, Ill. Bul. 335.
 - production, Kans. Bul. 249.
 - soil improvement, relation to time of harvesting, Mo. Bul. 279.
 - varieties, Mo. Bul. 131; N. Y. Cornell Bul. 491.
 - variety tests, Kans. Bul. 249; N. Y. Cornell Bul. 491.
- Spilonota ocellana*, N. Y. State Bul. 583.
- Spinach—
 - canning studies, Md. Bul. 307.
 - for canning, Md. Bul. 320.
 - varieties, Md. Bul. 307, 312.
- Spindle tuber of potato, symptoms, Nebr. Res. Bul. 47.
- Spiral ringing. (*See* Ringing.)
- Spirochetes, in swine, Calif. Hilgardia, V. 4, No. 13.
- Spray residue removal—
 - apples, N. Y. State Bul. 579.
 - fruit, N. Y. State Bul. 575.

- Spray residues, analysis for arsenic, N. Y. State Bul. 579.
- Spraying—
 - and dusting, fine sulfur for, N. Y. State Tech. Bul. 160.
 - and dusting, potatoes, Fla. Bul. 222; Me. Bul. 352.
 - apples and peaches, Va. Tech. Bul. 36.
 - fruit trees, N. Y. Cornell Bul. 498.
- Spraying materials—
 - for apple scab, Mich. Spec. Bul. 203.
 - water soluble arsenic in, Ohio Bul. 448.
- Sprays—
 - for codling moth, Wash. Bul. 232.
 - preparation and use, Oreg. Bul. 259. (*See also* Oil sprays.)
- Spruce—
 - black, volume tables, Minn. Tech. Bul. 57.
 - damping-off, soil treatment, N. Y. Cornell Mem. 124.
- Squashes, breeding, Iowa Bul. 263.
- Standard of living. (*See* Country life, Families, Farm homes.)
- Starters, effect on flavor of butter, Ark. Bul. 249.
- Steam—
 - sterilization of greenhouse soil, Ohio Bul. 451.
 - use in dairy plants, Wis. Bul. 411.
- Steers—
 - and calves compared, in beef production, Iowa Bul. 271.
 - fattening, Ill. Bul. 328.
 - feeding, Black Belt, Ala. Bul. 231.
 - feeding for beef, Nebr. Bul. 252.
 - growth, retarded, and mature size, Mo. Res. Bul. 123.
 - prices, Idaho Bul. 172.
 - roughages for, Miss. Bul. 278.
 - sweet clover hay for, Minn. Bul. 261.
 - value, high-grade and low-grade, W. Va. Bul. 225.
 - wild oat hay for, Calif. Bul. 481.
 - winter, feeding, Ind. Bul. 330.
- Stem rot of sweet potato. (*See* Sweet potato wilt.)
- Stinking smut—
 - breeding wheat resistant to, Nebr. Res. Bul. 51.
 - of wheat, varietal resistance, N. Dak. Bul. 231.
 - resistance of wheat to, Calif. Hilgardia, V. 4, No. 7.
 - wheat, control, Wash. Bul. 241.
- Stipa pulchra*, carbohydrate metabolism, Calif. Hilgardia, V. 5, No. 4.
- Stock share renting, Va. Bul. 271.
- Stomach worms, sheep, Conn. Storrs Bul. 157.
- Stone removal, farm land, Minn. Bul. 250.
- Storage—
 - apples, acidity changes, Iowa Res. Bul. 131.
 - grapes, studies, N. Y. Cornell Mem. 131.

Storage—Continued.

- insulation, fruit and vegetables, Pa. Bul. 241.
- pears, effect on quality, Oreg. Bul. 254.
- prunes, Idaho Bul. 167.
- sweet potatoes, Miss. Bul. 279.

Stored grain. (*See Grain.*)

- Stoves, kerosene, study, Nebr. Res. Bul. 48.

Straw—

- manure from, N. Y. State Bul. 573.
- mulch, effect on apple trees, Ark. Bul. 254.

Strawberries—

- cost of production, Oreg. Bul. 245.
- cultivation, West. Wash. Bul. 16-W.
- culture, Fla. Bul. 204; Md. Bul. 315; Ohio Bul. 444.
- diseases and insects, Fla. Bul. 204.
- effect of nitrogen fertilizers, Ohio Bul. 466.
- marketing and production, Md. Bul. 315.
- varieties, N. Y. State Bul. 563; Ohio Bul. 444.

- Streptococci, in relation to mastitis, Conn. Storrs Bul. 158.

- Streptococcus lactis*, proteolysis of butter, Iowa Res. Bul. 123.

- Strymon melinus*, Tex. Bul. 401.

- Sudan grass, culture, Tex. Bul. 396.

Sugar beets—

- breeding for resistance to curly top, Calif. Hilgardia, V. 4, No. 14.
- composition, Mich. Tech. Bul. 108.
- culture and farm practices, Mont. Bul. 232.
- curly top, Calif. Bul. 465.
- effect of soil, fertilizers and light, Mich. Tech. Bul. 108.
- fertilizers, Mich. Spec. Bul. 205.

Sugar cane—

- farms, organization and power utilization, La. Bul. 215.
- fertilizer demonstrations, La. Bul. 203.
- root rot studies, La. Bul. 212.
- variety tests, La. Bul. 203, 211.

- Sugar, maple. (*See Maple sugar.*)

Sulfate—

- content of tobacco, Ky. Bul. 308.
- in soil solution, Calif. Hilgardia, V. 4, No. 2.

- Sulfate of ammonia, in a sod orchard, Pa. Bul. 249.

- Sulfide spoilage, canned vegetables, Iowa Res. Bul. 117.

- Sulfide sulfur content of lime-sulfur, Colo. Bul. 352.

- Sulfonated oxidation products of petroleum, Md. Bul. 310.

Sulfur—

- as soil amendment, Tex. Bul. 414.
- dusting, effect on apple pollen and set of fruit, N. Y. Cornell Bul. 499.
- effect on crops, Tex. Bul. 408.
- fine ground, for dusting and spraying, N. Y. State Tech. Bul. 160.

Sulfur—Continued.

- in manure compost, Ga. Bul. 154.
- vaporized, for tomato leaf-mold, Mass. Bul. 248.

- Sulfur dioxide, use in shipping grapes, Calif. Bul. 471.

- Sunlight, effect on laying hens, N. Y. State Bul. 572.

- Surveys, economic, "Dixie" section, Washington County, Utah Bul. 214.

- Swamps, drainage and forest growth, Wis. Bul. 89.

- Sweet clover hay, for beef cattle, Minn. Bul. 261.

Sweet corn—

- inheritance of kernel arrangement, Ill. Bul. 320.
- production, economic study, Md. Bul. 305.

- suckering experiments, N. Y. Cornell Bul. 509.

- Sweet potato scurf, N. C. Bul. 274; Tech. Bul. 38.

Sweet potatoes—

- culture, Md. Bul. 311; N. C. Bul. 263.
- diseases, Fla. Bul. 212.
- fertilizer experiments, Ill. Bul. 319.
- fertilizers, Md. Bul. 311.
- marketing, Del. Bul. 161.
- nematode disease, N. C. Bul. 265.
- production and storage, Miss. Bul. 279.
- synthetic nitrogen and concentrated fertilizers, N. C. Bul. 266.
- stem rot. (*See Sweet potatoes, wilt.*)
- wilt, N. C. Bul. 273; Tech. Bul. 35.

- Sweet sorghum. (*See Sorghum.*)

Swine—

- abortion. (*See Abortion in swine.*)
- breeding, Ala. Bul. 234.
- diseases, Colo. Bul. 358.
- energy and protein requirements, Ill. Bul. 323.
- energy metabolism, Mo. Res. Bul. 143.
- feeding, Mich. Spec. Bul. 199; Oreg. Bul. 269.
- feeding, experiments with butter and margarine fats, W. Va. Bul. 230.
- feeding standards, Iowa Res. Bul. 118.
- ground grain and alfalfa for, S. Dak. Bul. 252.
- growth studies, W. Va. Bul. 230.
- pasture crops, Pa. Bul. 254.
- production, Iowa Bul. 270.
- production survey, Mo. Res. Bul. 139.
- quality and quantity of pork, Ind. Bul. 340.
- quality of pork, related to type, Ill. Bul. 322.
- rate and economy of gain, related to type, Ill. Bul. 321.
- soft corn for, Iowa Bul. 273.
- soybeans for, Mo. Bul. 266.
- spirochetes in necroses and hyperplastic formations, Calif. Hilgardia, V. 4, No. 13.

Swine—Continued.

type studies, Ill. Bul. 321, 322, 323.
(See also Pigs, Pork.)

Syrup—

maple, costs, Vt. Bul. 292.
sorghum, Ark. Bul. 241.

Tabanidae, Ark. Bul. 256.

Tabanus spp., Ark. Bul. 256.

Tankage, for egg production, N. Mex. Bul. 183.

Taxation—

and land value, Mo. Bul. 269.
California, Calif. Bul. 504.
Choctaw County, Miss. Bul. 282.
collection of taxes and division of
revenue, N. Y. Cornell Bul. 511.
farm, Mo. Bul. 291.
farm and urban, Va. Bul. 268.
farm, as related to property and in-
come, Ohio Bul. 459.
farm, assessed and market value, N. C.
Bul. 267.
farm property, N. Y. Cornell Bul. 485.
land, Wis. Bul. 406.
outline of Colorado laws, Colo. Bul.
355.
relation to agriculture, Conn. Storrs
Bul. 166.
trends of tax levies, Oreg. Bul. 257.

Temperature, soil and air, comparison of
daytime and nighttime, Calif. Hilgardia,
V. 4, No. 3, V. 4, No. 10.

Tenants, farm, Ky. Bul. 303.

Thielavia basicola, Conn. State Bul. 311.

Thistles, Canada, organic food reserves,
relation to eradication, Ohio Bul. 441.

Threshers. (See Combine harvesters.)

Tillage—

implements, design, Ala. Bul. 229.
wheat, Wyo. Bul. 161, 173.

Tilletia tritici, Calif. Hilgardia, V. 4, No. 7.

Tilletia tritici and *T. levis*, Nebr. Res. Bul.
51; N. Dak. Bul. 231; Wash. Bul. 241.

Timber—

black spruce, volume tables, Minn.
Tech. Bul. 57.
farm production, Mich. Spec. Bul. 196;
Wis. Bul. 407.
in development of Clifton Forge-Cov-
ington area, Va. Bul. 266.
management in farm woodlands, La.
Bul. 209.
marketing, Ind. Bul. 335.
rot in pepper tree, Ariz. Bul. 132.
tractor logging, cost, Calif. Bul. 474.
(See also Lumber.)

Timberlot, farm, Wis. Bul. 407.

Time studies—

farm homes, Oreg. Bul. 256; R. I.
Bul. 221; S. Dak. Bul. 247; Wash.
Bul. 234.
rural communities, S. C. Bul. 263.

Timothy—

for hay, N. J. Bul. 512.
injurious to tobacco crop, Wis. Res.
Bul. 105.

Tobacco—

chemical studies, Conn. State Bul. 311.
effect of crop rotations, Wis. Bul. 412.
effect of nitrate nitrogen following
timothy, Wis. Res. Bul. 105.
experiments, Pa. Bul. 240.
farm organization, Conn. Storrs Bul.
165.
fertilizer experiments, Conn. State Bul.
299; Va. Tech. Bul. 35; Wis. Bul.
413.
mosaic, Ky. Bul. 306.
mosaic virus, electrophoresis, Calif.
Hilgardia, V. 4, No. 15.
mosaic virus, overwintering, Wis. Res.
Bul. 95.
nicotine content, Conn. State Bul. 311;
N. Y. State Bul. 562.
potash fertilizers, Conn. State Bul.
311.
potassium, chlorine and sulfate con-
tent, as related to grade, Ky. Bul.
308.
root rot, Conn. State Bul. 311.
seed, germination, Wis. Res. Bul. 104.
soil reaction and liming, Conn. State
Bul. 306.
substation, report, Conn. State Bul.
299, 311.
virus diseases, Ky. Bul. 306.
viruses, relation to potato degenera-
tion, Ky. Bul. 309.

Tomato canning factories, management,
Ark. Bul. 240.

Tomato leaf-mold, control in greenhouse,
Mass. Bul. 248.

Tomato products—

spoilage, control, N. Y. State Bul. 570.
spoilage, organisms in, N. Y. State
Tech. Bul. 150, 151.

Tomatoes—

breeding, Pa. Bul. 248.
breeding wilt resistant, Ill. Bul. 361.
damping-off, N. Y. State Bul. 586.
effect of ethylene gas, Mich. Tech. Bul.
104.
experiments, Miss. Bul. 271.
experiments with potassium, N. J. Bul.
499.
fertilizer experiments, Ill. Bul. 319.
fertilizers, on calcareous glade soil,
Fla. Bul. 218.
for canning, variety tests, Md. Bul.
318.
grading, Ind. Bul. 328, 336.
nitrogen fertilizers, Miss. Bul. 273.
production, economic study, Md. Bul.
304.
seed treatment for damping-off, N. Y.
State Bul. 586.
selection, Pa. Bul. 248.
variety tests, Md. Bul. 318.
wilt resistant, breeding, Ill. Bul. 361.
Tompkins County, social relationships, N.
Y. Cornell Bul. 501.

Toruno. (*See* Ridglings.)

Town and country, service relationships, Okla. Bul. 194.

Toxocara canis, Minn. Tech. Bul. 71.

Tractors—

and trucks on rice farms, La. Bul. 218.

as farm power, Minn. Bul. 262.

economic study, N. Y. Cornell Bul. 506.

hitches, Mont. Bul. 229.

in farm management, Iowa Bul. 264.

in relation to farm organization, Ind. Bul. 332.

logging, cost, Calif. Bul. 474.

testing, Nebr. Bul. 233, 242.

Trade area, rural-urban, Ill. Bul. 326.

Trade centers, farm, Minn. Bul. 269.

Transpiration, fruit trees, Ill. Bul. 341, 353.

Transportation—

citrus, costs, Fla. Bul. 217.

fruit and vegetables, by truck, N. J. Bul. 503.

hogs, motor, Ind. Bul. 337.

Trees—

forest, studies, Vt. Bul. 298, 310, 311.

hardwood, growth, Wis. Res. Bul. 88.

hardy, Mass. Bul. 267.

shade, windbreak and timber, S. Dak. Bul. 246.

shelterbelt planting, Wyo. Bul. 163.

thinning, effect on growth, Vt. Bul. 311.

width of annual rings and rainfall, Vt. Bul. 298.

(*See also* Aspen, Conifers, Fir, Forestry, Locust, Oak, Pine, Spruce, Tung-oil tree.)

Tribune branch station, report, Kans. Bul. 250.

Trichogramma, mass production, Calif. Hildgardia, V. 4, No. 16.

Truck crops—

fertilizer experiments, Fla. Bul. 218; Ill. Bul. 319.

production, Utah Bul. 214.

(*See also* Vegetables.)

Truckage rates, livestock, comparison with freight rates, Ill. Bul. 342.

Trucks—

as farm power, Minn. Bul. 262.

as fruit and vegetable carriers, N. J. Bul. 503.

in livestock marketing, Ohio Bul. 440.

in marketing hogs, Ind. Bul. 337.

on farms, N. Y. Cornell Bul. 507.

on rice farms, La. Bul. 218.

Tuberculosis—

avian, in mammals other than swine, Nebr. Res. Bul. 49.

in calves, vaccination with Calmette-Guérin culture, BCG., Calif. Hildgardia, V. 4, No. 12.

Tucumcari field station, crop production, N. Mex. Bul. 176.

Tung-oil tree, culture, Fla. Bul. 221.

Turkeys—

blackhead, control by cecal ablation, Mo. Res. Bul. 133.

Turkeys—Continued.

blackhead, transmission, Conn. Storrs Bul. 156.

cecal pouches, pathology and physiology, Mo. Res. Bul. 136.

feed consumption and costs, Pa. Bul. 250.

with ablated ceca, food utilization, Mo. Res. Bul. 136.

Udder—

as source of thermophilic bacteria, N. Y. State Tech. Bul. 158.

streptococci in relation to mastitis, Conn. Storrs Bul. 158.

Unicorn plants, systematic botany, N. Y. State Tech. Bul. 149.

Urine of cattle, estrus producing hormone in, Mo. Res. Bul. 150.

Ustilago zeae, mutation and hybridization, Minn. Tech. Bul. 65.

Utah agricultural experiment station, report, Utah Bul. 209, 220.

Vaccine, cutaneous, for fowl pox, Mass. Bul. 257.

Veal, cooking, N. Dak. Bul. 239.

Vegetables—

canned, spoilage, Iowa Res. Bul. 117.

containers for starting plants, Pa. Bul. 244.

culture, Colo. Bul. 357.

demanded in White Mountains, N. H. Bul. 241.

distribution in terminal markets, N. Y. Cornell Bul. 494.

fertilizers, Ill. Bul. 346; Md. Bul. 309.

lime for, N. J. Bul. 498.

manure for, Md. Bul. 309; R. I. Bul. 225.

marketing, cooperative, Mo. Bul. 277.

oriental, composition and use, Hawaii Bul. 60.

paper mulch for, Ohio Bul. 447.

preferences in buying, R. I. Bul. 220.

production, fertilizer and manure for, Md. Bul. 309.

seed. (*See* Seed.)

shipment to Far East, Calif. Bul. 497.

storage, insulation, Pa. Bul. 241.

trucks as carriers, N. J. Bul. 503.

vitamin B content, Iowa Res. Bul. 120.

Venturia inaequalis, Mich. Spec. Bul. 203.

Vermont agricultural experiment station, report, Vt. Bul. 302, 319.

Vetch and oats, for hogs, Ala. Bul. 233.

Village and town families, incomes and expenditures, Minn. Bul. 253.

Village service agencies, N. Y. Cornell Bul. 493.

Vinifera grapes. (*See* Grapes.)

Violets, cytology of sterile hybrids, Vt. Bul. 325.

Virescent seedlings in maize, inheritance and linkage relations, N. Y. Cornell Mem. 125.

Virus diseases—

potatoes, Wis. Res. Bul. 87.

tobacco, Ky. Bul. 306.

- Viruses, tobacco, relation to potato degeneration. Ky. Bul. 309.
- Vitamin B—
 content of vegetables, Iowa Res. Bul. 120.
 deficiency, in nursing young, Ark. Bul. 252.
 in infant nutrition, Ark. Bul. 252.
 in lactation, Ark. Bul. 251.
- Vitamin D—
 of cod-liver oil in feeds, N. Y. Cornell Mem. 126.
 supplements, effect on hens, Ky. Bul. 304.
- Vitamin E, in reproduction, Ark. Bul. 250.
- Vitamins—
 deficient in chick feeding, Mo. Res. Bul. 124.
 fat soluble, in fertility and lactation. Ark. Bul. 250.
 requirements of nursing young, Ark. Bul. 251, 252.
- Vitis vinifera*, effect of dormant pruning on carbohydrate metabolism, Calif. Hilgardia, V. 4, No. 6.
- Vivian experiment farm, crop yields, S. Dak. Bul. 253.
- Wake County—
 farm families, living conditions, N. C. Bul. 269; Tech. Bul. 37.
 migration of sons and daughters of white farmers, N. C. Bul. 275.
- "Walking disease" of horses, Nebr. Res. Bul. 43.
- Walnuts, prices, supply and production, Calif. Bul. 475.
- Warehouses—
 fruit, temperature, Calif. Bul. 496.
 in cooperative purchasing associations, W. Va. Bul. 221.
- Washington agricultural experiment station, report, Wash. Bul. 237, 245.
- Water—
 carried for household purposes, Nebr. Bul. 234.
 ground and drainage, Middle Rio Grande Valley, N. Mex. Bul. 184.
 irrigation, measurement and application, Wash. Pop. Bul. 145.
 irrigation, requirement of citrus and avocado trees, Calif. Bul. 489.
 pollution, Raritan River, N. J. Bul. 489.
 systems, farm homes, Nebr. Bul. 234, 245.
- Weather—
 effect on crops and ranges, N. Mex. Bul. 182.
 effect on forest fires, Wis. Res. Bul. 91.
 (See also Climate.)
- Weed killers, composition, Conn. State Bul. 300.
- Weed seeds, effect of lead arsenate, N. Y. Cornell Bul. 508.
- Weeds—
 North Dakota, N. Dak. Bul. 243.
 (See also Quack grass, St. Johnswort, Thistle, Wild morning-glory.)
- Western Washington agricultural experiment station, report, West. Wash. Bul. 14-W, 18-W.
- Wheat—
 at farmers' elevators, Mont. Bul. 226.
 breeding for smut resistance, Nebr. Res. Bul. 51.
 culture, Kans. Bul. 248.
 effect of delayed harvest, Iowa Res. Bul. 130.
 Fusarial head blight, Minn. Tech. Bul. 59.
 irrigation, Mont. Bul. 234.
 marketing, Ohio Bul. 458.
 milling and baking qualities, Ariz. Tech. Bul. 27.
 mineral content, Utah Bul. 210.
 movement, Ohio Bul. 458.
 physiologic resistance to *Puccinia graminis*, Minn. Tech. Bul. 67.
 production, Kans. Bul. 248.
 production and prices, Calif. Bul. 502.
 protein content and yield, effect of fallow, Mont. Bul. 222.
 resistance to bunt, Calif. Hilgardia, V. 4, No. 7.
 scab, susceptibility of varieties and hybrids, Minn. Tech. Bul. 59.
 stinking smut, N. Dak. Bul. 231; Wash. Bul. 241.
 tillage, Wyo. Bul. 161, 173.
 varieties, Minn. Bul. 264.
 varieties, under irrigation, Mont. Bul. 234.
 variety test, West. Wash. Bul. 11-W; W. Va. Bul. 237.
 variety tests, Sheridan station, Wyo. Bul. 171.
 winter, variety tests, N. J. Bul. 483.
- Wheatland project, soil studies, Wyo. Bul. 168.
- Wheeling area, agricultural production to meet demand, W. Va. Bul. 228.
- White Leghorns. (See Poultry, Leghorns.)
- White Mountain hotels, demand for farm products, N. H. Bul. 241.
- White pine—
 blister rust, control, Conn. State Bul. 314.
 second growth, Wis. Res. Bul. 98.
 weevil, history and control, N. H. Bul. 247.
- Wild morning-glory, eradication with sodium chlorate, Wash. Bul. 235.
- Wild oat hay, for fattening steers, Calif. Bul. 481.
- Williston substation, report, N. Dak. Bul. 227, 235.
- Willow scab fungus, Conn. State Bul. 302.
- Windbreaks—
 for citrus trees, Calif. Bul. 484.
 (See also Shelter belts.)

Wireworms, review of research on control, Pa. Bul. 259.
 Wisconsin agricultural experiment station, report, Wis. Bul. 405, 410.

Women—

metabolism, Ohio Bul. 465.
 on farms, management of clothing, Okla. Bul. 197.
 on farms, routine and seasonal work, Nebr. Bul. 238.
 on farms, use of time, Oreg. Bul. 256 ; R. I. Bul. 221 ; S. Dak. Bul. 247 ; Wash. Bul. 234.

Wood—

oil tree, Fla. Bul. 221.
 sawing, electric motor, Pa. [Unnumbered Pub.] 1929.
 utilization, Minn. Bul. 271.

Woodland products, marketing, Va. Bul. 276.

Woodlands, farm, management, La. Bul. 209.

Woodlot products, utilization, Minn. Bul. 271.

Woodlots—

management, Mich. Spec. Bul. 196.
 (See also Timberlot.)

Woody plants, hardy, Mass. Bul. 267.

Wool—

fiber, medullated, Calif. Hilgardia, V. 4, No. 5.
 Karakul sheep, Tex. Bul. 405.
 macroscopical analysis, Calif. Hilgardia, V. 3, No. 19.

Wool—Continued

production and prices, Calif. Bul. 473.
 studies, Rambouillet sheep, Wyo. 174.
 Willamette Valley, Pacific cooperative wool growers, Oreg. Bul. 260.
 Willamette Valley, production and consumption, Oreg. Bul. 261.

Woolly apple aphid, relation to perennial canker, Oreg. Bul. 243.

Worms—

ascarid, survival of ova, Minn. Tech. Bul. 71.

stomach, sheep, Conn. Storrs Bul. 157.

Wyoming County, land utilization and farm management, Pa. Bul. 257.

Xenia and metaxenia, in apples, N. Y. State Tech. Bul. 170.

Yearlings, for beef production, Iowa Bul. 271.

Yellows disease, transmitted by *Cicadula sexnotata*, Calif. Hilgardia, V. 3, No. 18.

Yellows, of kale, Calif. Hilgardia, V. 5, No. 1.

Young people, organizations, relation to rural life, Va. Bul. 274.

Young women, metabolism, Ohio Bul. 465.

Zea mays, studies of Mendelian asynapsis, N. Y. Cornell Mem. 129.

Zeolites, soil, "build-up" and "break-down," Ariz. Tech. Bul. 28.

Zeolitic soils, magnesium and calcium in, Ariz. Tech. Bul. 26..



